TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

Natural fibers A1

EFFECTS OF STORAGE OF BALED INDIAN COTTONS AT BOMBAY AND AT THEIR RESPECTIVE GROWTH CENTERS ON THE LINT QUALITY. C. Nanjundayya and V. Venkataraman. Indian Central Cotton Comm. Technol. Bull. Ser. A No. 94: 1-42 (Oct. 1957). (711)

STATISTICAL SUPPLEMENT TO HANDLING BALES OF COTTON IN PUBLIC WAREHOUSES: METHODS AND EQUIPMENT. C. D. Bolt and J. B. Wilmeth. U. S. Agri. Mktg. Serv., Washington 25, D. C. Oct. 1958. 67 p. Marketing research report no. 250 (suppl.). Available from Superintendent of Documents, Washington 25, D. C. 45¢. (712)

This supplement provides detailed technical and statistical data that were not included in the main report (see abstr. 363/59). 82 tables.

INTRODUCTION TO PAKISTAN COTTONS. 3d ed. Pakistan Central Cotton Comm., Karachi. 1958. 32 p. (713)

EFFECT OF FATIGUE OF COTTON FIBERS ON THEIR PROPERTIES. N. P. Voevodina. Tekstil. Prom. 18, No. 5: 59-61 (1958). In Russian. Through BCIRA 39: 120 (1959). (714)

In the experiments described, the breaking load, elongation at break, and elastic and plastic deformations were taken as criteria of structural changes caused by fatigue. Comparison of the original fibers with those subjected to repeated stretching shows a considerable decrease in the total deformation at the expense of plastic and elastic deformations, the latter being a particularly valuable property of textile fibers. It is, therefore, essential to reduce to a minimum the number of repeated stresses during spinning and weaving.

1958 MID-SOUTH COTTON. F. L. Gerdes. Textile World 109: 63, 122-124 (Feb. 1959). (715)

Abnormal weather and late maturity caused wide variation in fiber qualities and manufacturing performance of this year's cotton. Compared with 1957 cotton, yarn break is lower, moisture content is lower, neppiness is greater, and manufacturing waste is average.

TECHNOLOGICAL REPORTS ON STANDARD INDIAN COTTONS, 1957. R. L. N. Iyengar. Indian Central Cotton Comm. Technol. Bull. Ser. A No. 96: 1-97 (Mar. 1958). (716)

FACTORS AFFECTING THE QUALITY OF COTTON FIBER. E. G. Eiges. Tekstil. Prom. 18, No. 1: 11-13 (1958). In Russian. Through BCIRA 38: 5252 (1958). (717)

The effect of three main factors affecting the physico-mechanical fiber properties during its development (orientation of the macromolecules; viscosity; specific density of the cotton cellulose, characterizing the packing density of the macromolecules) is discussed and a table is given, listing for 8 selected cotton varieties the fiber maturity, cellulose content of the fiber, viscosity of 0.5% cuprammonium solutions, angle of inclination of the coils, breaking load, fiber fineness, and elongation at break. 12 refs.

REED TAPERING OF CAPSULARIS JUTE AND ITS ROLE IN THE PREDICTION OF YARN IRREGULARITY. S. U. Chatterjee (Indian Central Jute Comm.). Textile Mfr. 85: 8 (Jan. 1959). (718)

The role that reed tapering plays in the prediction of yarn irregularity is briefly noted. Graph.

CASHMERE: THE CONSUMER IS THE GOAT. Consumer Repts. 24: 122-123 (Mar. 1959). (719)

Excessive guard hair and adulteration with other fibers were found in an investigation of "100% cashmere" garments. Consumers Union consultants believe that 26 microns should be the dividing line between down and guard hairs. Photo, table.

REACTION OF SODIUM BOROHYDRIDE WITH WOOL. J. M Gillespie (Mass. Inst. of Technol.). (Letter to the editor). Nature 183: 322-323 (Jan. 31, 1959). (720)

Sodium borohydride in alkaline solution rapidly dissolves wool under conditions of temperature and pH milder than many in current use. Tables, 4 refs.

COTTON TRADE JOURNAL INTERNATIONAL YEARBOOK, 1958-1959. Cotton Trade Journal, Inc., Memphis, Tenn. 1959. 272 p. $3.00. (721)

This yearbook contains articles on cotton growing, economics, marketing, manufacture, and research in countries all over the world.

EFFECT OF STRAIN ON THE ELECTRICAL RESISTANCE OF KERATIN. J. E. Algie (Wool Textile Research Labs., CSIRO, Australia). Textile Research J. 29: 1-6 (Jan. 1959). (722)

The change of resistance with time after the application of various strains has been examined at 90% rh and 20° C for keratin fibers. There is an initial instantaneous rise of resistance much greater than that due to a dimensional change, which is related to the strain, followed by a decrease in the resistance caused by the uptake of water vapor from the surrounding atmosphere. A further stage was observed during which the resistance rose as excess water vapor left the fiber. Diagr, photo, graphs, 13 refs.

Manmade fibers A2

NEW DEVELOPMENTS IN THE FIELD OF SYNTHETIC FIBERS. PART 1. H. Fourné and F. Fourné. Textil-Praxis 13, No. 11: 1124-1130; No. 12: 1205-1210 (1958). In German. Through BCIRA 39: 251 (1959). (723)

The most important manmade fibers at present on the market are reviewed, production figures for 1955 and estimates for 1960 and 1975 are listed, and the production of the individual fibers is described in detail, with reference to the respective machinery.

GLASS—GLASS FIBERS—GLASS FIBER FABRICS. H. Düsterdick. Spinner u. Weber 76, No. 19: 1156-1159; No. 21: 1293-1295 (1958). In German. Through BCIRA 38: 5134 (1958). (724)

Types of glass, properties of spinnable glass fibers, their preparation, and specific weaving problems are discussed, a brief note is given on finishing of the fabrics, and uses of glass fibers and fabrics are enumerated.

NEW SYNTHETIC FIBERS. PART 2. E. Frieser. Z. ges. Textil-Ind. 60, No. 21: 929-932 (1958). In German. Through BCIRA 39: 10 (1959). (725)

Data published previously on the tetrafluoroethylene fiber Teflon, polyalkyleneaminotriazole fiber, and polyvinylidenecyanide fiber Darlan are supplemented, the production and properties of polyvinylfluoride, Ftorlon, Verel, and polyacrylonitrile/polyvinylidene chloride copolymer fibers are reviewed, and a new polyester fiber from vanillin, new polyamide fibers (polyazine and nylon 6, 9), polyanhydride fibers (polymeric anhydrines of dicarboxylic acids), and a cellulose thiourethane fiber are reported.

CONTRIBUTION OF BRITISH INVENTION TO THE MANMADE FIBER INDUSTRY. Man-Made Textiles 35: 81-82 (Feb. 1959). (726)

Review of British contributions to the development of protein fibers, acetate rayon, spun-dyed yarns, alginate yarns, Terylene, nylon, and acrylic fibers.

RHOVYL POLYVINYL CHLORIDE FIBERS. L. Hochstaedter (Rhodia Inc.). Can. Textile J. 76: 61-62 (Feb. 6, 1959). (727)

The properties, characteristics, and uses of Rhovyl-55 and Rhovyl-T are briefly described.

STRUCTURE AND PROCESSING OF HIGHLY CRIMPED VISCOSE RAYON STAPLE FIBERS. W. Bandel and E. Simon. Textil-Praxis 13, No. 8: 788-795 (1958). In German. Through BCIRA 39: 420 (1959). (728)

Structural factors causing crimping in viscose fibers are pointed out. New uses of highly crimped fibers (mixtures of Flox H and Floxan, the former a viscose fiber with skin formation and the latter a coagulation fiber) are pointed out, and crimping of the two fiber types, finishing and blending problems, processing on the cotton spinning system, the production of various Floxan types, spinning plans for Flox H and Floxan, and causes and prevention of irregular twist distribution are discussed.

HOW TO PROCESS KODEL. R. C. Forrester, Jr. (Tenn. Eastman Co.). Modern Textiles Mag. 40: 45-48, 51-52 (Feb. 1959). (729)

Details of opening, blending, picking, carding, drawing, roving, spinning, and warping on the cotton system are given. Tables, diagrs, graphs.

PROPERTIES OF EASTMAN'S KODEL POLYESTER FIBER. E. V. Martin (Tenn. Eastman Co.). Modern Textiles Mag. 40: 43-45 (Feb. 1959). (730)

The physical, thermal, and chemical properties of Kodel are summarized. Tables, graph, photomicrograph.

YARN PRODUCTION B

DRAFTING THEORY IN JAPAN. K. Fujino (Kyoto Univ.). J. Textile Machy. Soc. Japan 4: 1-2 (Dec. 1958). (731)

A brief review of research in Japan on drafting theory. Table, 5 refs.

DRAFTING SYSTEMS AND YARN QUALITY. W. Nutter (T. M. M. (Research) Ltd). Textile Weekly 58(2): 1828-1834, 1856 (Dec. 26, 1958). (732)

Ring frame drafting systems and their modern derivatives, the relation of drafting to yarn uniformity, and sliver to yarn drafting are discussed.

GREENFIELD TOW-TO-TOP CONVERTER. Textile Merc. 140: 97 (Jan. 16, 1959). (733)

The operation of the converter is described, and technical details are given. Diagr.

STATIC ELECTRIFICATION OF RAYON STAPLE FIBER IN SPINNING PROCESS. M. Kato and K. Yoshida (Fukui Univ.). J. Textile Machy. Soc. Japan 4: 27-31 (Dec. 1958). (734)

The authors measured the quantity of static electricity produced in the spinning of rayon staple or blended nylon-rayon staple on the cotton system, and investigated how and where static electricity is generated. The effect of static elimination through mechanical methods was examined comparatively. Graph, tables, 4 refs.

Opening, picking, fiber preparation B1

IMPROVEMENT OF AN OPENING AND CLEANING MACHINE. I. I. Smirnov, K. I. Shenaeva, and S. L. Piotrovskii. Tekstil. Prom. 18, No. 5: 25-27 (1958). In Russian. Through BCIRA 39: 41 (1959). (735)

Analysis of the picker waste shows that, in the case of machines with porcupine cylinders, the waste contains a greater amount of dirt, indicating better separation and better cleaning of the fibers than when using the usual grid bars. The adverse effect of porcupine cylinders on nep formation is greater in the case of inferior-quality cotton than when more mature fibers are treated.

AUTOMATIC LAP DISCHARGING DEVICES ON PICKING MACHINES. G. Fahrbach. Melliand Textilber. 39, No. 9: 947-952 (1958). In German. Through BCIRA 38: 5139 (1958). (736)

The author describes several automatic lap-discharging mechanisms (designs of J. J. Rieter, Trützschler, and Hergeth) and also discusses the air-flow control on the new Hergeth picker, equipped with hopper feeder and feed shafts.

OPENING RANGE FOR COTTON AND MANMADE FIBERS. Trutzschler & Co. Textile Recorder 76: 76-77, 79 (Feb. 1959). (737)

The Trutzschler single process opening range is claimed to give reduction in neps and improved lap regularity. Features of the individual units are described in detail. A table giving recommended ranges for various classes of material is included. Diagrs, photo.

PNEUMATIC DELIVERY OF THE COTTON TO THE MAIN OPENER. A. P. Blagoveshchenskii and A. N. Myl'nikova. Tekstil. Prom. 18, No. 4: 53-54 (1958). In Russian. Through BCIRA 38: 724 (1958). (738)

AUTOMATICALLY CONTROLLED DUST CAGE FILTERS. W. Drews. Melliand Textilber. 39, No. 11: 1193-1196 (1958). In German. Through BCIRA 39: 272 (1959). (739)

Uses of automatic dust cage filters, especially in cotton cleaning installations, are described and illustrated. The construction and mechanism of these filters is demonstrated on the Trützschler SF 72 filter, reference being made in particular to the air conditions resulting from the connection of the filter to a ventilator system.

EFFECT OF MODERNIZING OPENING INSTALLATIONS IN A COTTON MILL ON THE QUALITY OF YARNS AND THEIR PROCESSING IN WINDING AND WEAVING SHEDS. L. Visscher. Textil-Praxis 13, No. 10: 1000-1006 (1958). In German. Through BCIRA 39: 40 (1959). (740)

In continuation of the previous article (abstr. 2832/58), the author discusses the effect of opening machinery modernization during further processing of card slivers, pointing out in particular the differences found in winding, warping, and weaving, and analyzing the test results.

DETERMINATION OF THE SUCTION POWER AND PRESSURE LOSSES IN CONDENSERS OF THE KV-1 TYPE FOR PNEUMATIC TRANSPORT SYSTEMS. B. A. Shrabshtein. Tekstil. Prom. 18, No. 1: 40-42 (1958). In Russian. Through BCIRA 38: 5138 (1958). (741)

Graphs and equations are given.

BLENDING AND OILING WOOL WITHOUT DUST. Spenser & Halstead Ltd. Fibres 20: 52-53 (Feb. 1959). (742)

Photographs and diagrams illustrate the Centriblender, Spenstead vortex wool-oiling equipment, and Centrimist humidifier.

Carding and combing B2

DETERMINATION OF THE RELATIONSHIP BETWEEN CARD SLIVER AND LAP IRREGULARITY. I. M. Khatenever. Tekstil. Prom. 18, No. 2: 28-31 (1958). In Russian. Through BCIRA 39: 47 (1959). (743)

It is shown that irregularities found on 10-15 mm long lap sections are not equalized by the leveling action of the carding machine and give, at a draft E = 100, sliver sections of 1.0-5.0 m length, reflecting the irregularities of the corresponding lap sections. The problem of improving lap regularity on short section (10 mm or less) is shown to be related to the introduction of automatic feeding on picking machines.

EFFECT AND ECONOMIC ASPECTS OF VARIOUS METHODS OF PREPARATION IN COTTON COMBING. J. Lünenschloss and H. Wagner. Textil-Praxis 13, No. 8: 767-773 (1958). In German. Through BCIRA 39: 274 (1959). (744)

The effect of preparatory combing stages on fiber parallelization and percentage combing waste is discussed, comparison is made between various methods, and the yarns obtained are examined. At suitable draft distribution, it is possible to effect considerable savings in production costs per combed sliver, while obtaining the same yarn quality.

TECHNICAL DATA ON COMBER AND LAP WINDER. rev. ed. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1958. 24 p. Free. (745)

MODERN FLAX SPINNING PRACTICE: CARDING OF FLAX TOWS. PART 2. Textile Recorder 76: 62-63 (Feb. 1959). (746)

Card pinning, setting of feed rollers, workers, and strippers, and waste recovery are discussed. Diagrs, photo.

CAUSES OF FLY FORMATION ON CARDING MACHINES. I. V. Pomadchin. Tekstil. Prom. 18, No. 5: 24-25 (1958). In Russian. Through BCIRA 39: 49 (1959). (747)

Analysis of the cause of fly formation in the main cylinder/doffer zone shows that the uncontrolled zone on the main cylinder could be advantageously shortened from 27.6 mm to 17 mm by changing the construction of the wedge knife to a plate knife.

LEVELING PROPERTY OF CARDING ENGINES. I. G. Borzunov. Tekstil. Prom. 18, No. 3: 22-25 (1958). In Russian. Through BCIRA 39: 48 (1959). (748)

Experiments are described to show that the equalizing effect on the card takes place as a result of repeated doubling of the fibrous material on the surfaces of the main and doffing cylinders (e.g. 2,500 times) and the ability of the spiked surfaces of the cylinder and flats to retain some of the fibers. In the case of all-metal clothing, the participation of the main cylinder in the equalizing action is 100% and that of the flats 26%.

TECHNICAL DATA ON CARDING. rev. ed. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1957. 35 p. Free. (749)

THREE-CYLINDER VERSUS FOUR-CYLINDER WOOLEN CARDING. W. J. Crofts. Textile Inds. 123: 113-115, 128 (Feb. 1959). (750)

The advantages and disadvantages of 3-cylinder and 4-cylinder carding, as well as the relocation of the burr crusher between the first doffer and the cylinder of the second section, are discussed. Diagrs, photo, table.

METALLIC VERSUS ORDINARY CLOTHING FOR COTTON CARDS. Am. Textile Reptr. 73: 9-10, 32 (Feb. 5, 1959). (751)

Mill men discuss why so little metallic clothing is used on cards in this country.

WOOLEN CARDING: SINGLE RING DOFFER CONDENSER. PART 2. J. A. B. Mitchell (Scottish Woollen Tech. Coll.). Textile Mfr. 85: 6-8 (Jan. 1959). (752)

Several variations of the single condenser, e.g. for long fibered and lively materials, are described, and the calculation of speeds for different materials is explained. See abstr. 3265/58 for Part 1. Diagrs.

CARDROOM MAINTENANCE: MAIN CYLINDER BEARINGS. A. Tansey. Textile World 109: 66, 120-122 (Feb. 1959). (753)

The economics of replacing worn bearings versus rebushing was investigated. It was found that it costs far more to replace sintered metal bushings on a frequent basis than it does to apply new bearings at long intervals, and that when the job is completed, there is no guarantee of performance.

LICKERIN WIRE: AT WHAT INTERVALS SHOULD IT BE REPLACED? S. Dinshaw. Indian Textile J. 69: 95-96 (Nov. 1958). (754)

A discussion of factors involved in determining replacement intervals, including consideration of various numbers of teeth used on American vs Indian cottons.

CROSROL COTTON WEB PURIFIER. G. Marshall. Textile Weekly 59(1): 257, 284 (Jan. 30, 1959). (755)

The Crosrol web purifier (Carding Specialists Co.) is a device mounted on the frame of the card between doffercomb and calender rollers. It consists of a pair of precision-ground hardened steel rolls between which the carded web is passed and ironed. The resulting yarn is claimed to be less neppy and smoother. Photo.

Drawing and roving B3

CONTROL OF FIBERS DURING DRAFTING. A. Valota. Industrie Textile: 661-663 (Oct. 1958); 755-759 (Nov. 1958). In French. Through BCIRA 39: 275 (1959). (756)

The articles of Dakin, Foster, and Locke (J. Textile Inst. 43: T545-T562 (1952) and 44: T544-T569 (1953)) are critically examined, with reference to the introduction of new drafting systems (Saco-Lowell, Rieter, Platt).

TECHNICAL DATA ON ROVING. rev. ed. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1957. 72 p. Free. (757)

STUDY ON DRAWING SYSTEMS IN THE COTTON SPINNING MILL. PART 2. A. J. Haschke. Deut. Textiltech. 8, No. 9: 437-438 (1958). In German. Through BCIRA 39: 53 (1959). (758)

In continuation of the previous article (abstr. 2843/58), the author discusses the effect of fluted rollers on the flow of fibers during their passage through the drawframe, suggesting improvements for existing constructions and better de-aeration of the fiber mass in new drawing systems.

DETERMINATION OF FIBER PARALLELITY BY MEANS OF TENSILE STRENGTH MEASUREMENT ON SLIVERS DURING VARIOUS PROCESSING STAGES. W. F. Du Bois. Tex 17, No. 10: 1372-1389 (1958). In Dutch. Through BCIRA 38: 5148 (1958). (759)

Results of measurements on cotton slivers from several drawing passages (up to 10) and after one single passage are reported and the relationship between sliver strength and various fiber properties is presented graphically. 13 refs.

INCREASED DRAFT ON DRAWING FRAMES. L. N. Karpinskaya. Tekstil. Prom. 18, No. 3: 56-58 (1958). In Russian. Through BCIRA 39: 52 (1959). (760)

The sliver produced on the experimental drawing frame described showed both on 1-m and 30-mm lengths a lower irregularity and the quality of the yarn obtained was slightly better than that produced in the usual manner. Existing 4-roller drawing frames can be easily converted to the new system.

MODERNIZATION OF DRAWFRAMES IN THE USSR. A. M. Kurbanov and I. F. Trompeter. Tekstil. Prom. 18, No. 5: 65-67 (1958). In Russian. Through BCIRA 39: 51 (1959). (761)

WHITIN EVEN-DRAFT DRAWING. Whitin Mach. Works. Whitin Rev. 25: 60-65 (Dec. 1958). (762)

Features and productivity are described. Photos, diagrs, tables.

Spinning, winding, twisting B4

SOURCES OF DEFECTS IN SPINNING WOOLEN AND VIGOGNE YARN. [Fehler in der Streichgarn- und Vigognespinnerei]. H. D. Nötzold, K. Herold, and O. Franke. VEB Verlag Technik, Berlin, Germany. 1957. 139 p. In German. $1.35. (763)

Sources of inferior quality, from preopening through picking, carding, and spinning.

SPINNING TENSION ON RING SPINNING FRAME. T. Musha (Toyo Spinning Co. Ltd). J. Textile Machy. Soc. Japan 4: 21-26 (Dec. 1958). (764)

The author measured the spinning tension of the ring spinning frame continuously under various conditions and analyzed the tension variation curves obtained from these measurements in an effort to keep tension at a constant level. The following methods were tried to reduce the tension level and the tension variation of the ring spinning frame: (1) adjusting the variable speed drive of a spindle to the vertical motion of ring rail, (2) setting a winding angle by using various bobbins and rings, (3) balloon control by using an antinode ring, and (4) changing the moving distance of the lappet. Photo, diagrs, graphs, 6 refs.

RELATIONSHIP BETWEEN BOBBIN SIZE AND SPINDLE SPEED IN RING SPINNING. D. Gautier. Industrie Textile: 669-680 (Oct. 1958); 747-754 (Nov. 1958). In French. Through BCIRA 39: 282 (1959). (765)

A relatively simple method is described, by means of which it is possible, by using the given formula, to predetermine the spindle speed of classical ring spinning machines so as to ensure their smooth operation, with a number of ends down of about 50-60 per 1,000 bobbins/hr under otherwise correct working conditions. The study also showed a distinct relationship between ring diameter, tube diameter, yarn count, and spindle speed, and the nomograms given permit the choice of a bobbin size suitable for spinning the respective count from American cotton so as to obtain maximum bobbin weights and maximum spinning yields.

PROCESSING OF CHEMICAL FIBERS WITH RECTANGULAR AND TRAPEZE STAPLE IN WORSTED SPINNING MILLS. J. Lünenschloss and H. Güttler. Melliand Textilber. 39, No. 10: 1076-1080; No. 11: 1203-1206 (1958). In German. Through BCIRA 38: 5160 (1958). (766)

It is shown that the regularity on small and large yarn lengths deteriorates after combing of chemical fibers with rectangular (uniform) staple, especially in high-tenacity fibers which are not shortened during processing. Use of trapeze staple in worsted spinning and omitting the combing process where the uncombed slivers show sufficient cleanliness are recommended as preventive measures.

THE WORK OF "TASHTEKSTILMASH". N. P. Fomin. Tekstil. Prom. 18, No. 2: 25-28 (1958). In Russian. Through BCIRA 39: 57 (1959). (767)

Constructions of a new spinning machine, speed frame, and twisting machine, developed by the Tashkent Textile Machinery Plant, are described and illustrated.

TECHNICAL DATA ON SPINNING. rev. ed. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1958. 93 p. Free. (768)

NEW MACHINES FOR THE COTTON SPINNING MILL. M. E. Vilenskii. Tekstil. Prom. 18, No. 2: 22-25 (1958). In Russian. Through BCIRA 39: 56 (1959). (769)

A brief review is made of the construction and technological principles of new cotton spinning machines, with special reference to high-draft drawing mechanisms.

PERFORMANCE OF RING SPINNING MACHINES WITH THREAD GUIDE VIBRATORS. E. D. Misonov. Textil-Praxis 13, No. 8: 782-787 (1958). In German. Through BCIRA 39: 280 (1959). (770)

Experiments with vibrating thread guides (vibrators) on cotton ring spinning machines showed that these vibrators cause more twist to be transferred to the nip region of the front pair of rollers, thereby strengthening the weak portion of the thread and improving the quality of the yarn. The effect of the vibrator on the cleanliness of the yarn, yarn tension, number of yarn breakages, and tensile strength of the yarn is discussed.

RING SPINNING DIRECT FROM SLIVER TO YARN. PART 1. OM-S SUPER HIGH DRAFT SYSTEM. PART 2. DESIGN FEATURES AND PERFORMANCE OF THE OM-S RING SPINNING FRAME. B. A. Rankilor. Textile Merc. 140: 123-125 (Jan. 23, 1959); 154-157 (Jan. 30, 1959). (771)

TECHNICAL DATA ON TWISTING. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1958. 68 p. Free. (772)

POSITION OF THE SECTOR OR QUADRANT ON THE TWISTING MACHINE TO OBTAIN CYLINDRICAL COPS AND A HIGHER NET WEIGHT OF THE COP. W. Landschek. Melliand Textilber. 39, No. 8: 839-844 (1958). In German. Through BCIRA 38: 5156 (1958). (773)

Sources of faults in cop formation on older-type twisting machines are discussed and directions are given for their elimination, with reference to the position of the sector and the mechanism of cop formation on modern twisting machines.

LEESONA 210 TWISTER-CONER. Man-Made Textiles 35: 66 (Jan. 1959). (774)

The Leesona No. 210 is a 2-for-1 twister designed to twist and cone filament yarns in one operation. Its features are briefly described. Photo.

AUTOMATIC DRAFT REGULATORS. A. G. Sevostyanov. Tekstil. Prom. 18, No. 5: 20-24 (1958). In German. Through BCIRA 39: 54 (1959). (775)

In this review, the author discusses the present trends in the development of spinning techniques, the use and construction of automatic draft regulators, and the use of radioactive measuring elements for determining changes in the thickness of the product.

WHITIN PIEDMONT SPINNING FRAME. Whitin Mach. Works. Whitin Rev. 25: 2-7 (Dec. 1958). (776)

Features and production figures are covered. Photos, table.

TOP ROLL TESTER AS SPINNING AID. E. Dworschak. Textil-Praxis (English ed.) No. 4: 151-153 (Dec. 1958). (777)

See abstr. 28/59.

NOMOGRAMS AND CALCULATION METHODS FOR DETERMINING THE ROLLER VELOCITY ON RING-SPINNING AND RING-TWISTING MACHINES. E. Gros. Melliand Textilber. 39, No. 10: 1072-1075 (1958). In German. Through BCIRA 38: 5158 (1958). (778)

The method described is based on the use of nomograms by means of which it is possible to calculate the required roller velocity. Nomogram 1 is used in determining the yarn delivery from ring diameter, traveler speed, spindle revolutions, and twist, and nomogram 2 for determining the roller revolutions from delivery and roller diameter. Formulas on which the nomograms are based are given and a special slide rule for determining the roller revolutions is also described.

WHITIN S T A SUPER-DRAFT CHANGEOVER FOR SPINNING. Whitin Mach. Works. Whitin Rev. 25: 22-27 (Dec. 1958). (779)

A new, streamlined top arm, an ingenious spring weighting arrangement, and ball bearing top rolls on all three lines are among the features of the Whitin S T A changeover. The Whitin S T A changeover can be applied to any Whitin or other standard spinning frame. Photos, diagrs.

DEVICE FOR DETERMINING THE TENSION BETWEEN TRAVELER AND BOBBIN. E. D. Mizonov. Tekstil. Prom. 18, No. 1: 25-27 (1958). In Russian. Through BCIRA 38: 5155 (1958). (780)

The device described makes it possible to register, by means of an oscillograph, changes of yarn tension in the difficultly-accessible section between traveler and bobbin, during movement of both the ring rail and traveler. The mechanism of the device is based on electronic principles.

NEW BALL-SHAPED WASHERS FOR SPINDLES. V. Delmen. Textil-Praxis (English ed.) No. 4: 153-154 (Dec. 1958). (781)

See abstr. 35/59.

WAVY WEAR ON SPINNING RINGS. K. Fujino and Y. Shimotsuma. J. Textile Machy. Soc. Japan 4: 3-13 (Dec. 1958). (782)

With the progress of the wearing of a fine-spinning ring by the running of a traveler, a regular waviness is often observed on the worn surface of the ring. It reduces the stability of the running traveler and shortens the life of the ring. This article deals with the characteristics and the mechanism of the growth of waviness on a ring and considers preventive methods. Photos, diagrs, graphs, tables, 10 refs.

FUNDAMENTALS OF SPINNING RING DEVELOPMENT. PART 2. TRAVELER BEHAVIOR IN FLIGHT. P. F. Grishin. Whitin Rev. 25: 40-59 (Dec. 1958). (783)

A brief analysis of the yarn tension theory is given. Simple working formulas are developed for calculation of angles determining the position of the traveler on the ring and forces acting on the traveler at any moment of spinning. From data derived from the calculations, it is concluded that the yarn tension is not as critical for smaller angles of pull as it is usually thought and the horizontal pressure of the traveler upon the ring may be reduced by the yarn pull up to 50%. Diagrs, tables, photos, graph, 2 refs.

DEVICE FOR MOUNTING RING TRAVELERS. W. Oeser. Textil-Praxis (English ed.) No. 4: 145-151 (Dec. 1958). (784)

See abstr. 32/59.

LUBRICATING DEVICE FOR TEXTILE SPINDLES. H. Schäfer. Melliand Textilber. 39, No. 11: 1211-1212 (1958). In German. Through BCIRA 39: 281 (1959). (785)

The device described (model SP11) consists of a sliding frame with two oil containers: one for the reception of the rinsing oil and the other for the fresh oil. A multiple pump is used for removing the used oil, rinsing, and pumping fresh oil into the spindle cups. Advantages of the device (Maschinenfabrik Friedrich Reichert) are enumerated.

Yarns B5

NEW YARN MAKING CONCEPT. E. Bobkowicz. Am. Textile Reptr. 73: 14, 33 (Feb. 5, 1959). (786)

In the Bobyarn process, fiber fleeces are laminated, slit into ribbons, and twisted into yarns. The application of the process to bast fibers, particularly to ramie, is discussed and its advantages are cited.

COTTON/VISCOSE RAYON STAPLE YARN BLENDS. W. Bandel and E. Simon. Melliand Textilber. 39, No. 11: 1199-1203; No. 12: 1386-1389 (1958). In German. Through BCIRA 39: 284 (1959). (787)

By adding viscose rayon staple to cotton it is possible to considerably improve the quality of medium and cheap cottons. In finer cottons, the costs of the raw material can be reduced and finer yarn counts with high regularity can be spun by mixing Duraflox-type viscose rayon staple (with high wet-strength). 26 refs.

HIGH STRENGTH REGENERATED CELLULOSE FIBERS. D. K. Smith (Rayonier Inc.). Textile Research J. 29: 32-40 (Jan. 1959). (788)

Advances in tensile and fatigue properties of tire cord rayon are reviewed, and the factors responsible for the improvements are discussed. Potential strength aims for future cellulosics are discussed, and some suggestions are made as to the type of products for which the structural skeleton of the cellulose polymer appears to offer outstanding advantages, particularly when coupled with bonding or stabilizing resins in intimate molecular association. Graphs, tables, diagrs, photomicrographs, 11 refs.

ROPE-MAKING TECHNOLOGY. Columbian Rope Co. Textile Inds. 123: 116-119 (Feb. 1959). (789)

The basic steps in rope-making are described, and the factors determining fiber selection and rope size are noted. Photos.

STRESS RELAXATION OF VISCOSE AND NYLON YARNS. M. Maeda (Fukui Univ.). J. Textile Machy. Soc. Japan 4: 32-44 (Dec. 1958). (790)

In order to obtain basic data on the control of yarn tension while the yarn is on a machine, drawing experiments were made concerning the effects which the conditions of tensile stress have on the stress relaxation of commercial nylon and viscose yarns after the stoppage of yarn deformation. Photo, diagrs, graphs, 33 refs.

OBSERVATION OF DEFORMATION OF YARNS. Y. Miura (Kyoto Univ.). J. Textile Machy. Soc. Japan 4: 14-20 (Dec. 1958). (791)

Objects of this study are (1) to survey the deformation of the diameter of a yarn caused by twisting number and tensile load when the yarn receives no compressive load and (2) to survey the elastic character of strain caused by imposing a compressive load on the yarn. Photo, diagrs, graphs, tables, 3 refs.

THEORY OF AN ESSENTIALLY CELLULAR STRUCTURE OF YARN. E. A. Grilikhes. Tekstil. Prom. 18, No. 3: 29-32 (1958). In Russian. Through BCIRA 39: 138 (1959). (792)

The theory of an ideally cellular structure of yarn is based (in contrast to the layer theory) on the fact that the yarn structure changes regularly in dependence of the equilibrium between the external stresses acting on the yarn (twisting and drafting forces) and the internal resistance of the fibers. This change in the yarn structure is characterized by a coefficient of inertia. An empirical formula is given for determining the inertia coefficient of cotton yarns. With this formula, it is possible to calculate the mean stress in the cell and its quantitative distribution per layer, and to determine in which cell the respective fibers strive to arrange themselves. Thus changes in yarns from any fibers can be studied by determining the inertia coefficient A as a function of external forces on the yarn. The inertia coefficient can also be measured by means of a torsion balance constructed similarly to the device for determining yarn stiffness.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

OIL PRESSURE CONTROLLED WARPING MACHINE. J. Schneider. Melliand Textilber. 39, No. 11: 1215-1219 (1958). In German. Through BCIRA 39: 306 (1959). (793)

A new oil-pressure controlled warping machine (model Z7 of Franz Müller) is described, with special reference to constructional details which contribute to economical production.

STARCH ETHERS AND THEIR USES IN THE TEXTILE INDUSTRY. H. Felgentreff. Textil-Praxis 13, No. 10: 1040-1043 (1958). In German. Through BCIRA 39: 66 (1959). (794)

The chemical constitution of starch, its etherification on an industrial scale, and uses of starch ethers in sizing, printing, and finishing are discussed.

KNOM YARN THICKNESS METER AND THREAD CLEARER 2940. K. F. Seim. Melliand Textilber. 39, No. 11: 1210-1211 (1958). In German. Through BCIRA 39: 305 (1959). (795)

The device described for measuring the yarn thickness and for eliminating slubs operates with light switches and can be used on stationary or running threads.

MECHANISM AND MAINTENANCE OF THE RUTI WARPING MACHINE, ZD TYPE. A. Gasser. Melliand Textilber. 39, No. 8: 854-855 (1958). In German. Through BCIRA 38: 5168 (1958). (796)

The latest model of this warping machine features positive control means for regulating the progressively increasing velocity after each stoppage, and improved accessibility to the warp threads. Illustrations are given.

IS OUR WINDING PLANT UP-TO-DATE? R. Worm. Melliand Textilber. 39, No. 8: 874-878 (1958). In German. Through BCIRA 38: 5166 (1958). (797)

Reorganization of the winding plant is discussed, with special reference to two basic requirements: high bobbin productivity and the production of perfect bobbins. The principles of the balloon theory are explained, thread-clearing and -braking devices are reviewed, and comparison is made between cross-wound and taper bobbins.

STUDY OF THE WINDING CHARACTERISTICS IN WINDERS WITH CONSTANT CROSSING. A. Combe. Industrie Textile No. 861: 589-592 (Aug./Sept. 1958). In French. Through BCIRA 39: 63 (1959). (798)

Whereas in winders with constant linear velocity the bobbins are driven by friction, winders with constant crossing have their bobbins driven by their shaft, the number of windings per crossing remaining always the same, regardless of the bobbin diameter, if the ratio of the angular velocities ω_1 / ω_2 is constant. The winding mechanism is studied theoretically.

DEVICE FOR MEASURING THE WARP TENSION ON SIZING MACHINES. A. I. Borodin. Tekstil. Prom. 18, No. 1: 49-50 (1958). In Russian. Through BCIRA 38: 5172 (1958). (799)

The device described contributes to the reduction of thread breakages on the loom.

INFLUENCE OF MOISTURE ON WARP SIZING. Textile Mfr. 85: 15-17 (Jan. 1959). (800)

The importance of moisture control in sizing cotton, rayon, and nylon are discussed, and methods of avoiding overdrying and excessive moisture regains are pointed out. 5 refs.

STRETCH YARN DELIVERY ARRANGEMENT FOR SCHWEITER CONE WINDERS. Schweiter Ltd. Textile Merc. 140: 127-128 (Jan. 23, 1959). (801)

The yarn delivery arrangement makes it possible to reduce the yarn tension to almost nil so that it can run through the tensioning device to bring it up to the required degree of tension. Diagr, photo, graphs.

EXCELLENT STARCH SUBSTITUTE IN SIZING. I. S. Kochetkov. Tekstil. Prom. 18, No. 2: 62 (1958). In German. Through BCIRA 39: 64 (1959). (802)

The advantages of using a sulfite cellulose extract (waste product of the cellulose/paper industry) for sizing cotton warps are enumerated and directions are given for the preparation of the sizing bath.

MODERN FLAT-DRYING SIZING MACHINES FOR SINGLE OR MULTIPLE WEB DRYING. J. Schneider. Melliand Textilber. 39, No. 9: 967-972; No. 10: 1086-1089 (1958). In German. Through BCIRA 38: 5171 (1958). (803)

Drying with a mixture of superheated steam and air is discussed from the economical viewpoint and illustrated on several Sucker models of flat-drying sizing machines. Reference is also made to the mechanism of the DE-warping machine.

Weaving C2

WEAVING THREE-PICK TERRY CLOTH. S. Scharf. Textil-Praxis (English ed.) No. 4: 162-163 (Dec. 1958). (804)

LEASE ROD AS A TENSION INDICATOR. K. Greenwood. Textile Recorder 76: 64-67 (Feb. 1959). (805)

The construction and application of the Manra lease rod tensiometer, developed by the Brit. Rayon Research Assoc., are explained. Diagrs, graphs, photo.

WEFT TENSION, SELVAGE FORMATION, AND SETTING IN WIDTH OF VARIOUS RIBBON TYPES OF DIFFERENT WEAVES IN WORKING ROOMS HAVING DIFFERENT TEMPERATURES. F. Heinz. Melliand Textilber. 39, No. 10: 1102-1105 (1958). In German. Through BCIRA 38: 5179 (1958). (806)

QUALITY CONTROL IN WEAVING. Textile World 109: 70 (Feb. 1959). (807)

The system of records, checks, and follow-up used by the Eva Jane Plant of Avondale Mills is briefly described and illustrated.

EFFECT OF THE MATERIAL ON THE WORKLOAD OF THE WEAVER. H. Relligmann. Melliand Textilber. 39, No. 9: 982-985 (1958). In German. Through BCIRA 38: 5180 (1958). (808)

The effect of the running properties of warp and weft yarns on the workload of the weaver is investigated, with special reference to the number of looms to be attended by one operator and the number of picks attainable per loom and per hour.

THE USE OF DOUBLE REEDS IN TERRY WEAVING. S. Scharf. Textil-Praxis 13, No. 10: 1030-1031 (1958). In German. Through BCIRA 39: 70 (1959). (809)

The advantages of using double reeds in terry weaving are enumerated, with special reference to the elimination of reed marks.

STATISTICAL FAULT CONTROL IN WEAVING. H. G. Wunderlich. Textil-Praxis 13, No. 10: 1032-1037 (1958). In German. Through BCIRA 39: 74 (1959). (810)

The method described comprises (1) a survey of the faults due to material, machine, personnel, or unknown factors, (2) determination of the costs, frequency, importance, and avoidability of the individual fault types, (3) setting up of a working plan, (4) analysis of the faults in the order of their importance and avoidability, and (5) recording of the results in a fault index for future reference.

WEAVING ECONOMICS. M. Steiner. Man-Made Textiles 35: 41, 43 (Jan. 1959). Textile Mfr. 85: 19-25 (Jan. 1959). Textile Recorder 76: 73-75, 72 (Feb. 1959). (811)

Ways and means of controlling costs in weaving sheds are discussed, with special reference to the Sulzer weaving machine. Most of the figures and operational data on which the graphs are based were taken from German mills, but the ideas expressed are of general significance. Graphs.

WORK LOAD CALCULATION OF A BOBBIN SETTER. H. Zeile. Textil-Praxis 13, No. 8: 810-812 (1958). In German. Through BCIRA 39: 487 (1959). (812)

The calculation is effected on the basis of the time-methods-measurement system and the use of a nomogram.

AUTOMATION OF CLOTH LOOMS. H. Makowitzki. Melliand Textilber. 39, No. 9: 972-977 (1958). In German. Through BCIRA 38: 5174 (1958). (813)

A new automatic 2-color pick-and-pick bobbin-changing mechanism for cloth looms is described. This mechanism can be used for the usual, single color, circular shuttle change, as well as for a series of a 2-color order of picks to be woven with 3-5 shuttles. Coarse and fine wool yarns with both Z- and S-twists can be woven.

PIERON VERDOL DOUBLE LIFT OPEN SHED JACQUARD MACHINE. W. Riesnert. Textil-Praxis (English ed.) No. 4: 157-161 (Dec. 1958). (814)

See abstr. 4084/58.

LOOMS FOR DIFFERENT FABRICS. H. Kullrich. Melliand Textilber. 39, No. 8: 866-871 (1958). In German. Through BCIRA 38: 5178 (1958). (815)

A classification is given of fabrics to be woven on heavy, medium, and light looms, respectively, and a list of looms is presented, which contains German and other types, arranged according to the names and producers and indicating the material and fabric type for which they are designed.

CONVERTING TO AUTOMATIC LOOMS. H. Makowitzki. Textil-Praxis (English ed.) No. 4: 164-168 (Dec. 1958). (816)

The methods used by Georg Fischer AG for determining the feasibility of converting looms already in operation to automatic looms are described and illustrated.

LOOMFIXER AND HIS JOB. PART 2. W. Westbrook. Textile Bull. 85: 60, 62-63 (Jan. 1959). (817)

The proper assembly, alignment, and leveling of the loom frame are discussed. Diagrs.

NEW IDEAS IN LOOM DESIGN. I. H. Thomas (Brit. Cotton Industry Research Assoc.). Textile Weekly 59(1): 209-214 (Jar.. 23, 1959). (818)

The work leading to the evolution of the design of the picking mechanism, dobbies, takeup motion, and letoff motion of the Shirley automatic loom for continuous filament yarns is reviewed. Graph, diagrs.

AUTOMATIC WARP TENSION CONTROL ON LOOMS. D. S. Tavkhenidze and R. I. Sadzhaya. Tekstil. Prom. 18, No. 1: 27-29 (1958). In Russian. Through BCIRA 38: 5177 (1958). (819)

The new method for automatic tension control and the device described can be applied both to existing and new looms.

JACQUARD MACHINES. J. Schneider. Melliand Textilber. 39, No. 8: 856-862 (1958). In German. Through BCIRA 38: 5176 (1958). (820)

Modern jacquard machines operating on the double-lift principle are reviewed, with reference to machines with half-open and open-shed systems.

SETTING OF LOOMS BY MEANS OF GAGES. K. Wolf. Deut. Textiltech. 8, No. 9: 442-446 (1958). In German. Through BCIRA 39: 68 (1959). (821)

Experiments showed that uniform basic setting and systematic control of the looms can be effected by using setting gages. This leads to a reduction in the warp-breakage frequency and increased productivity, as well as to a decrease in repair work and quality improvement of the product. The use of the gages is described.

LOOM SETTING RENDERED EASY. O. Reiter. Melliand Textilber. 39, No. 11: 1223-1225 (1958). In German. Through BCIRA 39: 311 (1959). (822)

A brief review is made of the Illset system (abstr. 1221/58) which makes it possible to adjust accurately all looms weaving the same type of fabrics.

SHUTTLELESS LOOMS: AN OUTLINE OF SOME RECENT DEVELOPMENTS. V. Duxbury. Textile Weekly 59(1): 144, 147-148, 153 (Jan. 16, 1959). (823)

Features of the Sulzer, Pilling, Tumack, and Kovo looms are briefly noted, and the Maxbo loom is described in detail.

STANDARDIZATION OF THE PERFORMANCE OF WEFT PROTECTORS ON AUTOMATIC LOOMS. N. V. Lipshits. Tekstil. Prom. 18, No. 5: 29-32 (1958). In Russian. Through BCIRA 39: 69 (1959). (824)

The feeler of the central weft protector should be arranged at the intersection point of the path of the back shuttle noses during passage in both directions. Lowering of the feeler and scanning of the weft should be effected directly after passage of the shuttle and the feeler. Very little time is required for disengaging the stop and braking of the loom. The lay should thereby stop at a distance of not more than 10-12 mm from the fell of the cloth.

Knitting C3

COUNT, GAGE, AND WEIGHT CONSIDERATIONS FOR DOUBLE JERSEY FABRICS. J. B. Lancashire. Hosiery Trade J. 66: 82-84 (Feb. 1959). (825)

By means of the alignment chart illustrated, the weight in ounces per square yard of fabric can be obtained without calculation, except for simple addition, when more than one set of measurements is involved.

CALCULATING THE PERCENTAGE COMPOSITION AND YARN LENGTH FOR WARP KNIT FABRICS. E. Prusa. Textil-Praxis (English ed.) No. 4: 177-182 (Dec. 1958). (826)

INTERPRETATION OF AVERAGES IN KNITGOODS MANUFACTURE. K. Mamnicki. Hosiery Trade J. 66: 120-122 (Feb. 1959). (827)

Examples are given to show how the averages in certain problems related to testing, production, and costing can be calculated and interpreted.

NEW CHEMSTRAND NYLON WARP-WIND PACKAGE FOR IMPROVED QUALITY SEAMLESS HOSIERY. Chemstrand Corp., Pensacola, Fla. Oct. 1958. 6 p. Bull. no. 4.12. Free. (828)

TIPS FOR LEARNER-KNITTERS. PART 2. T. Powell. Textile Inds. 123: 149-153, 156 (Feb. 1959). (829)

Pointers on operating and maintaining the stop motion, takeup, and clutch, on knotting, stitch counting, oiling, and seconds prevention.

SPLICED TRICOT STOCKINGS. J. B. Lancashire. Knitter 23: 23-24 (Feb. 1959). (830)

Two-bar tricot stockings produced on a cut principle are claimed to be comparable to full-fashioned and circular knit stockings. Technical processing information is given. Diagrs.

Fabrics C4

TUFTING: PAST, PRESENT, AND FUTURE. J. N. Collinge (Cobble Bros. Machy. Co. Ltd). Textile Weekly 59(1): 215, 218-219 (Jan. 23, 1959). (831)

EXPERIMENTAL MAP PAPERS CONTAINING SYNTHETIC FIBERS. Tech. News Bull. Nat. Bur. Standards 43: 8-9 (Jan. 1959). (832)

Photos, tables, 3 refs.

FABRIC ENGINEERING: THE STRUCTURAL GEOMETRY OF CLOTH. T. V. Ananthan (Bombay Textile Research Assoc.). Silk Rayon Inds. India 1: 19-28 (Nov. 1958). (833)

A review of fabric geometry theories. Diagrs, graphs, tables.

HOW TO USE METALLIC YARNS IN TERRY TOWELS. T. Hargreaves. Textile Inds. 123: 124-128 (Feb. 1959). (834)

Methods of introducing metallic yarns into towels for decorative appeal without an accompanying harsh feel are described. Diagrs.

CURTAIN FABRICS FROM GLASS. Textile Recorder 76: 68-69 (Feb. 1959). (835)

The properties and processing of curtain fabrics woven from folded continuous glass filament yarns are briefly described. Photo.

MANUFACTURING, DYEING, AND FINISHING DEFECTS IN BROAD WOVEN FABRICS: THEIR CAUSE AND CURE. Canadian Assoc. of Textile Colourists & Chemists and Textile Soc. of Canada. Textile Technical Federation of Canada, 223 Victoria Ave., Westmount, Montreal 6, Que., Canada. 1958. 145 p. Textile monograph no. 4. $2.00. (836)

Abstracts on fabric defects from the Journal of the Textile Institute (beginning with the 1936 volume) are classified and indexed.

BONDED MATERIALS OF TOMORROW. Man-Made Textiles 35: 46-47, 91 (Feb. 1959). (837)

In this discussion of new principles and production methods in the preparation of bonded structures, patent developments in flexible and semirigid nonwoven and laminated fabrics and in glass fiber reinforced rigid laminates are reviewed.

GABARDINE STRUCTURE AND WEAVING. H. Müller. Textil-Praxis (English ed.) No. 4: 173-175 (Dec. 1958). (838)

COLOR EFFECT OF "TAMAMUSHI FABRICS". M. Tanaka and K. Furusaku (Osaka City Univ.). J. Textile Machy. Soc. Japan 4: 57-60 (Dec. 1958). (839)

The causes of the iridescent color change were examined by measuring the surface reflectance with a photoelectric spectrophotometer and by measuring the color difference with Hunter's color difference meter. Diagr, graphs, tables.

WOVEN FABRIC STRUCTURE: FABRIC STYLING ON THE BASIS OF HOPSACK WEAVES. D. C. Snowden. Man-Made Textiles 35: 48 (Feb. 1959). (840)

NATTE WEAVES FOR MEN'S SUITING. H. Walter. Textil-Praxis (English ed.) No. 4: 170-172 (Dec. 1958). (841)

Three different types of fabrics are described: coarse woolen fabrics from one warp and one weft; fine wool and silk fabrics, reinforced by an intermediate weave; and coarse wool and blended yarn fabrics, which have a back weave of double density. Diagrs.

PATTERNS FOR LIGHT PIQUE FABRICS. H. Walter. Textil-Praxis (English ed.) No. 4: 155-156 (Dec. 1958). (842)

Various designs are described and illustrated.

NEW NONWOVEN MACHINERY. Proctor & Schwartz Inc. Modern Textiles Mag. 40: 34, 36 (Feb. 1959). (843)

The Proctor Form and Duo Form have been specially designed for making nonoriented webs. Diagr, photos.

NEW POTENTIALS FOR NONWOVENS. M. T. Hoffman. Am. Textile Reptr. 73: 11-12, 31 (Jan. 1, 1959). (844)

Some new developments in nonwoven machinery, methods, and products are considered.

MOISTURE REGAIN OF TIGHTLY WOVEN COTTON FABRICS. E. L. Skau and E. Honold (So. Reg. Research Lab.). (Letter to the editor). Textile Research J. 29: 96-97 (Jan. 1959). (845)

The mechanical restraints to swelling in a tightly woven cotton fabric are sufficient to result in a measurably lower moisture regain than that for the loose yarns when exposed to even moderate relative humidities. The compression of the fibers prevents them from swelling freely and thus limits the amount of water they can sorb. Table, 4 refs.

TUFTED CARPETS: MANUFACTURE AND YARN PREPARATION. H. Sneyd (Courtaulds Ltd). Textile Mfr. 85: 12-14 (Jan. 1959). (846)

The paper covers the construction and operation of the tufting machine, the backing fabrics in use, properties of the fibers employed, and processing details for tufted carpet yarns on the woolen, flax, jute, and cotton systems. Diagrs.

PROBLEMS OF COOLING THE NEEDLE DURING SEWING OF CHEMICAL FIBER PRODUCTS. F. B. Schmetz and E. G. Haase. Melliand Textilber. 39, No. 10: 1113-1116 (1958). In German. Through BCIRA 38: 5186 (1958). (847)

Difficulties encountered on account of frictional heating of sewing needles during making-up of chemical fiber fabrics are discussed and the following preventive measures are described: reduction of the friction by special needle shapes and surfaces and by liquids, and cooling by liquids and compressed air. The Schmetz air-cooling system has proved very effective and is already being fitted into sewing machines by various machine manufacturers. Silicone oils or oil emulsions have given good results as thread lubricants.

RUG-CLEANING ABILITY OF VACUUM CLEANERS. A. Baragar (Univ. of Nebraska). J. Home Econ. 51: 115-118 (Feb. 1959). (848)

A new test procedure for evaluating the amount of dirt removed from rugs by vacuum cleaners is briefly described and data are presented showing the type of cleaning that can be expected with representative vacuum cleaners. Tables.

DEVELOPMENT AND PROPERTIES OF TEXTILES FROM POLYESTER FIBERS BLENDED WITH OTHER FIBERS. J. Monheim. Melliand Textilber. 39, No. 8: 888-892 (1958). In German. Through BCIRA 38: 5185 (1958). (849)

The development, uses, and costs of fabrics from blends of polyester fibers with wool, natural silk, cotton, flax, rayon staple, rayon staple/mohair, and polyamide fibers are discussed. Light to heavy qualities of fabrics containing 45% wool or 35% cotton or 30-40% rayon have proved most successful.

FINISHING AND CHEMICAL PROCESSING D

DYEING AND FINISHING OF KODEL FIBER AND FABRICS. W. R. Ivey, Jr. (Tennessee Eastman Co.). Am. Dyestuff Reptr. 48: P94-P97 (Feb. 9, 1959). (850)

General practices and procedures for Kodel and Kodel blends are outlined. Diagrs, table.

FINDINGS DURING DYEING AND FINISHING OF MIXED FABRICS FROM POLYESTER FIBERS AND COTTON. H. Dunkel. Textil-Praxis 13 No. 10: 1061-1063 (1958). In German. Through BCIRA 39: 106 (1959). (851)

Some experiences gained during dyeing and finishing of polyester/cotton fabrics are reported, with reference to the pretreatment (precleaning and desizing), drying, dyeing (single-bath dyeing with disperse dyes for the polyester fiber and substantive dyes for cotton; simultaneous dyeing of both components with selected Anthrasol or pigment dyes), and final finishing (waterproofing, singeing).

BAN-LON NYLSUISSE FINISHING. Soc. de la Viscose Suisse. SVF Fachorgan Textilveredlung 13, No. 10: 604-606 (1958). In German. Through BCIRA 39: 104 (1959). (852)

Directions are given for preshrinking, presetting, dyeing, and finishing of woven and knitted Ban-lon Nylsuisse fabrics and fully-fashioned articles, and dyeing of the yarns.

HOW TO DYE AND FINISH KODEL FIBERS AND FABRICS. W. R. Ivey, Jr. (Tenn. Eastman Co.). Modern Textiles Mag. 40: 49-51 (Feb. 1959). (853)

The general practices that are recommended for processing fabrics made from Kodel fibers or from blends of Kodel with other fibers are covered. Information on the performance of Kodel fiber in fabrics and garments is included.

DYEING AND FINISHING NYLON RIBBONS. Brit. Nylon Spinners Ltd. Textile Mfr. 85: 11 (Jan. 1959). (854)

Recommendations are given for scouring, setting, bleaching, dyeing, and finishing.

Chemical processes D1

DEGRADATION OF LINEN CELLULOSE OWING TO EXCESS BLEACHING. V. Broglia. Chimica 34: 235-238 (1958). Through BCIRA 39: 338 (1959). (855)

Fibers degraded with excess sodium hypochlorite show a characteristic fluorescence that is about proportional to the intensity of degradation.

FABRIC COATING WITH SILICONE/RUBBER PASTES. H. Anders. Textil-Praxis 13, No. 8: 844-845 (1958). In German. Through BCIRA 39: 379 (1959). (856)

Various types of silicone/rubber pastes are enumerated, their application to fabrics is described, and their advantages are pointed out.

RECENT DEVELOPMENTS IN COTTON FINISHING WITH ACETAL REACTANTS. J. B. Irvine, T. J. Cronin, and J. H. Davids (Quaker Chem. Prods. Corp.). Textile Research J. 29: 74-88 (Jan. 1959). (857)

A glycol acetal cellulose reactant which imparts high crease resistance to fabrics is discussed. Determination of optimum conditions of application in the laboratory are followed by discussion of several applications in textile mills. A catalyst which permits low temperature rapid curing of acetal reactants is also discussed. Results of textile mill usage of the catalyst are given. An efficiency factor relating crease resistance increase to tensile loss is suggested. Tables, graphs, 3 refs.

IMPARTING WRINKLE RESISTANCE TO COTTON FABRICS WITH TRIAZONE DERIVATIVES. J. D. Reid, J. G. Frick, Jr., R. M. Reinhardt, and R. L. Arceneaux (So. Reg. Research Lab.). Am. Dyestuff Reptr. 48: P81-P90 (Feb. 9, 1959). (858)

The methylol derivatives of 5-substituted tetrahydrotriazinone have been investigated as finishing agents for imparting wrinkle resistance and minimum-care properties to cotton fabrics. The preparation and properties of some of these agents and the properties of the finished fabrics are described. These triazones are potentially inexpensive and may be applied to fabric by conventional procedures. The properties of the finished fabrics are compared with those of fabrics finished with some other commercial wrinkle-resistance agents, and the advantages and disadvantages of each are discussed. Tables, graph, 28 refs.

AMINE ODOR IN RESIN-TREATED FABRICS. A. C. Nuessle, E. O. J. Heiges, and R. A. Olney (Rohm & Haas). Textile Research J. 29: 41-54 (Jan. 1959). (859)

One of the problems associated with the use of nitrogenous resins on textile fabrics is the spasmodic and usually unpredictable development of fishy amine odor. The present study presents results of experiments on factors influencing trimethylamine formation, the effect of type and concentration of catalyst, and effect of resin type. Tables, diagr, 8 refs.

EFFECT OF CREASEPROOFING ON CREASE RECOVERY. PART 3. W. Wegener. Melliand Textilber. 39, No. 11: 1262-1268 (1958). In German. Through BCIRA 39: 438 (1959). (860)

The crease recovery of a viscose rayon fabric (taffeta weave) finished with 3 different Kaurit concentrations was examined as a function of time, taking also into account the position of the crease. The results show that the crease recovery increases steadily with increasing concentration. The abrasion resistance, determined in dependence of the Kaurit concentration, is compared with the crease recovery. For previous parts see abstr. 2112/58 and 4506/58.

POLYAMINE RESINS FOR FINISHING OF HYDROPHOBIC FIBERS. E. I. Valko and G. C. Tesoro (Onyx Oil & Chem. Co.). Textile Research J. 29: 21-31 (Jan. 1959). (861)

A finish designed to protect textiles in use against accumulation of static must possess hygroscopicity, high ionic concentration, and resistance to washing and drycleaning. Polyelectrolytes deposited from aqueous solution and cross-linked on the fiber are capable of fulfilling these requirements. Polyamines cross-linked by alkylation with polyhalides were selected to study the correlation between structure and antistatic performance. The gelling time of the polyamine/polyhalide mixture in vitro supplied an excellent indication for the suitability of the reactants to form durable antistatic finishes on the fiber. Some correlation between the degree of polymerization and branching of the polymers and their antistatic performance was established. The new class of polyamine resins promises to be a useful addition to available textile finishes. Graphs, tables, 21 refs.

EPOXY RESIN BLENDED FINISHES FOR WHITE COTTONS. D. D. Gagliardi and F. B. Shippee (Gagliardi Research Corp.). Textile Research J. 29: 54-65 (Jan. 1959). (862)

New finishes based on blends of epoxy resins with selected aldehydes, acetals, formaldehyde-amino resins, hemiacetals, and polymeric materials such as silicones, polyethylene, polyacrylates, and epoxy based plasticizers were studied to produce new and improved effects on white cotton fabrics. With some of the formulated blends, durable wash-and-wear finishes, crease resistance, and dimensional stability are obtained which will stand repeated laundering and chlorine bleaching operations. An outstanding finish for white cottons has been developed based on combinations of epoxy resins with dimethylol ethylene urea. The practical conditions of cloth preparation, drying and curing cycles, choice of catalysts, washing procedures, and afterfinishing operations are described for obtaining optimum results. Also discussed are the limitations of these and other presently available finishes for cotton, with special emphasis on some theoretical possibilities for new cotton fiber modification. Tables, graphs, 10 refs.

CONTINUOUS OPEN-WIDTH BLEACHING INSTALLATION. SODIUM CHLORITE PROCESS. R. B. Vogel. Rev. Textile 57, No. 6: 302-306 (1958). In French. Through BCIRA 39: 77 (1959). (863)

The advantages of the new process described as the thermoreaction system (Thermo-Verweil system) are enumerated and the installation (developed by Gerber, Krefeld) is described and illustrated.

CHLORINE RETENTION IN RESIN-TREATED COTTONS. H. H. Mosher (Arkansas Co.). Textile Research J. 29: 88-95 (Jan. 1959). (864)

The results of a study on the development of potentially damaging chlorine retention by cyclic urea-formaldehyde finishes and particularly DMEU indicates that such finishes when affixed onto cotton goods may undergo a change during aging or laundering, with the formation of progenitors of chlorine retention. This change may be minimized, but not entirely prevented, by producing a tight set on cotton goods by high concentration of catalyst and elevated curing temperatures. The factors that accelerate the formation of chlorine retention precursors are laundering, storage of finished fabrics under adverse conditions (acidic), steaming, and possibly sunlight. Inhibition of the development of damaging chlorine retention on resin-treated cotton goods can generally be secured by maintaining the fabric neutral or slightly alkaline. Tables.

INCREASING THE STRENGTH OF TEXTILES WITH COLLOIDAL DISPERSIONS OF SILICA. A. E. Williams. Textile Merc. 140: 52, 55, 59 (Jan. 9, 1959). (865)

Methods of application and effects on fabric strength and soiling of Syton 2X and W20 are discussed.

ACID PEROXIDE BLEACHING. K. Prett. Melliand Textilber. 39, No. 9: 999-1001 (1958). In German. Through BCIRA 38: 5194 (1958). (866)

The disadvantages of alkaline bleaching and scouring treatments are enumerated and attention is drawn to a new possibility of bleaching textile fibers. The method is based on converting hydrogen peroxide with acetic acid anhydride to monoperacetic acid in dilute bleaching solutions in the presence of a suitable catalyst, resulting in a very pronounced increase of the oxidation potential. The main advantage of this method appears to be its applicability to bleaching of coloreds, linen, synthetic fibers, and rayon staple fiber. The process is cheap and, since it is carried out in acid medium, involves no corrosion risks.

SEMICONTINUOUS AND CONTINUOUS INSTALLATION FOR BLEACHING LINEN FABRICS. H. Pierling. Textil-Praxis 13, No. 8: 840-843 (1958). In German. Through BCIRA 39: 336 (1959). (867)

Two bleaching installations for the treatment of linen fabrics are described.

CHLORITE BLEACHING OF FABRICS. V. V. Shtutser. Tekstil. Prom. 18, No. 3: 44-47 (1958). In Russian. Through BCIRA 39: 78 (1959). (868)

This is a review of 25 literature references, mainly foreign.

NEW CHEMICAL MODIFICATIONS OF COTTON. E. Frieser. Z. ges. Textil-Ind. 60, No. 22: 977-979 (1958). In German. Through BCIRA 39: 109 (1959). (869)

In this review, the author discusses carboxymethylation, amination, carbamidoethylation, phosphorylation, and treatment of cotton with activated olefin compounds. The properties of the individual products are pointed out. 21 refs.

EFFECT OF AIR IN HYPOCHLORITE BLEACHING. I. Rusznak and A. Szekely. Melliand Textilber. 39, No. 8: 883-885 (1958). In German. Through BCIRA 38: 5192 (1958). (870)

The experiments described show that, almost independently of the concentration and temperature of the liquor, the degree of whiteness of cellulosic fibers (mainly flax) bleached with alkaline sodium hypochlorite is higher if the material comes into contact with air during the bleaching process. This is mainly due to the change in pH, the extent of which depends above all upon the contact-area between the liquid and gaseous phase, the carbon dioxide content of the air, and the distance between the fibrous material and the gaseous phase. The degree of tendering depends upon the combined action of pH and hypochlorite concentration. If these two factors do not occur simultaneously during bleaching, a better bleaching effect can be obtained at a minimum degree of tendering. In experiments with carbon dioxide, several anomalies were observed; it was also found that the atmospheric oxygen causes decomposition of hypochlorite, as a result of which its oxidizing action decreases. In the presence of oxygen, less hypochlorite is necessary to obtain the same degree of whiteness as in its absence.

FLUORESCENT BRIGHTENING AGENTS. D. A. W. Adams (Hickson & Welch Ltd). J. Soc. Dyers Colourists 75: 22-31 (Jan. 1959). (871)

The nature of fluorescent brightening agents, their historical development, properties, and uses are reviewed, and some details are given of their application in soap and detergents, in textile processing, and in the production of paper. Their chemical constitution is then discussed, and indications are given of the effect on their properties of changes in structure. Graphs, 120 refs.

SODIUM CHLORITE BLEACHING AND ITS IMPORTANCE FOR SUBSEQUENT FINISHING PROCESSES. O. Deschler. Melliand Textilber. 39, No. 10: 1117-1120 (1958). In German. Through BCIRA 38: 5193 (1958). (872)

The development of chlorite bleaching from 1843 is reviewed, with special reference to the advantages of sodium chlorite (protection of fiber, uniform bleaching, etc.).

CONTROL OF BLEACHING TREATMENTS ON COTTON. Industrie Textile No. 861: 625-627 (Aug./Sept. 1958). In French. Through BCIRA 39: 79 (1959). (873)

A review is made of the literature referring to the color of cotton, the effect of acid treatment, the importance of boiling-off under pressure for the absorbency of the fiber, the role of sodium silicate and sodium sulfite in the boiling-off treatment, and the effect of steaming time and of caustic soda concentration in continuous bleaching.

EFFECT OF WOOL POROSITY ON MECHANISM OF STEEPING PROCESS. H. Sanuki (Tokyo Univ.). J. Textile Machy. Soc. Japan 4: 45-52 (Dec. 1958). (874)

A study of the extent to which the degree of opening of wool affects the efficiency of the steeping process. Graphs, tables, 4 refs.

CHEMICALLY-RESISTANT STEELS FOR BLEACHING AND DYEING PLANTS. L. Wetternik. Melliand Textilber. 39, No. 10: 1152-1156 (1958). In German. Through BCIRA 38: 5195 (1958). (875)

Steels and alloys used in bleaching and dyeing plants are reviewed, types of corrosion are discussed, and preventive measures are recommended. Corrosion curves are given to show the difference in the behavior of various steel types to hydrochloric and sulfuric acids, and their uses are enumerated.

COMPARISON OF THE MECHANICAL PROPERTIES OF COTTON YARNS AND FABRICS TREATED WITH ANHYDROUS ETHYLAMINE AND WITH MERCERIZING CAUSTIC. H. M. Ziifle, F. V. Eggerton, and L. Segal (So. Reg. Research Lab.). Textile Research J. 29: 13-20 (Jan. 1959). (876)

Samples of cotton yarn, tire cord, and fabric were subjected to treatment with anhydrous ethylamine to produce cellulose III. The physical and mechanical properties of these products were compared with those of the untreated materials (containing cellulose I crystal lattice) and of mercerized cotton (containing cellulose II crystal lattice). The ethylamine treatment produced effects upon the textile properties of the original materials which were similar to those of slack-mercerization but smaller percentagewise. The properties of the treated cottons apparently were affected more by the accompanying fiber swelling and yarn shrinkage than by the shift in crystal lattice. Ethylamine-treated bandage gauze compared favorably with the slack-mercerized "conforming bandage" pioneered at the Southern Regional Research Laboratory. Photomicrographs, tables, graphs, 16 refs.

CRABBING PROCESS. Can. Textile J. 76: 65 (Feb. 6, 1959). (877)

The main objects of crabbing are discussed, and the way in which subsequent processing determines the conditions of crabbing are explained.

MYKON LUBRICANT SF. Warwick Chem. Ltd. Textile Merc. 140: 130-132 (Jan. 23, 1959). Textile Weekly 59(1): 198-199 (Jan. 23, 1959). (878)

Mykon lubricant SF is an aqueous dispersion of polyethylene containing 25% solids. Its application to increase resistance to creasing, abrasion, and static, and to improve tearing strength of resin treated cotton is discussed.

IMPROVING THE HAND OF FABRICS OF DACRON. P. N. LaGasse and A. R. Taylor, Jr. (E.I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 48: 77-80 (Feb. 9, 1959). (879)

The C-H-C process improves the liveliness, drape, and covering power of Dacron staple and filament fabrics plus giving the fabric a dryer, warmer hand. In the C-H-C process, the fabric is calendered, heat-set, and then treated in a solution of caustic soda. The procedure is outlined. Graphs, photomicrographs.

OPEN-WIDTH WASHING RANGES. F. Smith & Co. Ltd. Man-Made Textiles 35: 58, 60 (Feb. 1959). (880)

Unusual features are noted. Photos, diagrs.

TURBINATOR IN TEXTILE FINISHING. I. L. Häusermann. Textil-Praxis 13, No. 11: 1167-1171 (1958). In German. Through BCIRA 39: 341 (1959). (881)

The construction and mechanism of the Turbinator (Machinenfabrik Benninger AG) for use in wet-processing machinery to intensify the liquor circulation are described.

AC MULTIMOTOR DRIVES FOR TEXTILE FINISHING. G. Schindler. Melliand Textilber. 39, No. 11: 1272-1275 (1958). In German. Through BCIRA 39: 343 (1959). (882)

A new device for controlling the speed of commutator motors makes it possible to use the ac multimotor drive where dc multimotor drives with Leonard switch were used. The advantages of the ac multimotor drives are enumerated.

IS WATERPROOFING OF TEXTILES WITH SILICONES SOLELY A FASHION? M. Kramer. Textil-Praxis 13, No. 10: 1050-1055 (1958). In German. Through BCIRA 39: 116 (1959). (883)

Recent developments in the production of silicone emulsions and their use in waterproofing of textile materials from natural and regenerated celluloses are reviewed and it is shown that the treatment of textiles with silicones is not a temporary phenomenon and that silicones must be included in the range of classical finishing agents.

COTTON: THE SUPREMELY USEFUL FIBER. PART 2. A. J. Hall. Fibres 20: 43-45 (Feb. 1959). (884)

Cotton's lack of resistance to microbiological attack is noted, and protection by chemical finishes or by fiber modification is discussed. Other problems considered are those of crease resistance, shrinkage resistance, dyeing, and proneness to soiling.

NONIONIC DETERGENTS IN RAW-WOOL SCOURING INCLUDING STUDIES OF WASTE CLARIFICATION. W. Fong (Western Reg. Research Lab.). Am. Dyestuff Reptr. 48: P45-P50 (Jan. 26, 1959). (885)

This paper presents results of a laboratory study of the scouring effectiveness under varied pH conditions of several selected nonionic detergents of the polyethylene glycol and alkylolamide types and the coagulation behavior of the resultant wastes on treatment with bentonite and acid. In some instances the clarified waste was analyzed for residual detergent in order to determine the feasibility of recycling to the scouring process. Data are also presented on the treatment of wastes which result from desuinting, an optional watersteeping operation commonly carried out in the first bowl of a scouring set to remove water-soluble suint and dirt before detergent-scouring in subsequent bowls, and from scouring with clarified suint solutions. Graphs, tables, 15 refs.

CAUSTIC RECOVERY SYSTEM. V. F. Wilkerson and M. D. Rochelle (N. C. Finishing Co.). Textile Inds. 123: 120-122 (Feb. 1959). (886)

The basic requirements of an efficient recovery system are described.

IMPROVED OPEN-WIDTH WASH BOX. Sir James Farmer Norton & Co. Ltd. Textile Merc. 140: 95-96 (Jan. 16, 1959). (887)

The incorporation of a vibrating wedge type of mechanism into an open-width washer has as its objects a fluctuation in water pressure on the fabric, and the scrubbing of the surface of the fabric by causing the liquor to oscillate to and fro along the fabric surface in a high state of turbulence. Diagr.

SOME PROPERTIES OF FLAMEPROOF FABRICS. M. W. Sandholzer (Nat. Bur. of Standards). Am. Dyestuff Reptr. 48: 37-41 (Jan. 26, 1959). (888)

A group of 5 cotton and rayon fabrics were treated with 7 different flame-retardant finishes. Flame resistance of the treated fabrics was determined by 3 different methods, before laundering and after laundering up to 14 times. Fabric strength determinations were made on the treated and untreated fabrics, before and after laundering. In general, the treatments produced a reduction in tearing strength of the fabrics, but did not significantly affect the breaking strength. Tables, graphs, 6 refs.

Dyeing and printing D2

REMAZOL DYES. H. Zimmermann. Melliand Textilber. 39, No. 9: 1026-1027 (1958). In German. Through BCIRA 38: 5199 (1958). (889)

The constitution of Remazol dyes is discussed, and their simple application, brilliant shades, and good fastness properties are pointed out. The dyes differ in their chemical structure and in their reaction mechanism from Procion H and Cibacron dyes; they are able to react with the cellulose in alkaline medium, whereby vinyl compounds are formed which, owing to the vinyl residue being particularly activated by the adjacent sulfone group, react with the fiber with formation of cellulose ethers. The commercially available Remazol dyes are mainly intended for printing and single-bath pad-steam and thermofixing methods.

NEW FINDINGS AS REGARDS THE STRUCTURE OF AZO DYES. A. Schaeffer. Melliand Textilber. 39, No. 9: 1002-1005 (1958). In German. Through BCIRA 38: 5211 (1958). (890)

Analysis of the infrared spectra showed that o-hydroxy or o-amino -azo dyes are not true azo dyes but o-quinone hydrazones. In Naphthol AS dyes, a chelate linkage is formed by the OH-group with the CO-group but not with the azo group.

SUBJECT INDEX TO DYESTUFFS DIVISION TECHNICAL PUBLICATIONS, JAN. 1945 TO DEC. 1957. 4th ed. Imperial Chemical Industries Ltd, Dyestuffs Div., Manchester, England. 1958. 125 p. (891)

NEW FRONTIERS IN DYEING CELLULOSE. J. Boulton (Courtaulds Ltd). Modern Textiles Mag. 40: 24, 71-72 (Feb. 1959). (892)

The theoretical advances of the past 25 years and their impact on the dyeing of cellulose and cellulose blends are reviewed, and probable future developments are noted.

EASY-TO-DYE SYNTHETIC FIBERS. A. J. Hall. Textile Recorder 76: 70-72 (Feb. 1959). (893)

The incorporation of dye-attractive groupings in fiber-forming polymer molecules to achieve increased dye affinity in manmade fibers is discussed.

RECENT DEVELOPMENTS IN DYEING ORLON. L. Bidgood, Jr. and W. Bell (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 48: P51-P54 (Jan. 26, 1959). (894)

Improved procedures are described for piece dyeing blended fabric of Orlon acrylic fiber and Dacron polyester fiber. A new one-bath method gives better shade duplication and control in a shorter time than was possible with the older two-bath process. Recent progress in cationic dye synthesis is exemplified by shades dyed on 100% Orlon, which are said to withstand 500 hr exposure in the Weather-Ometer. Tables.

WET PROCESSING ACRILAN AND ITS BLENDS. W. H. Hindle (Chemstrand Corp.). Fibres 20: 49-51 (Feb. 1959). (895)

This article discusses recent developments in wet-processing Acrilan and Acrilan 16, with special reference to the use of basic or cationic dyes. Two- and 3-color effects are discussed, and an appendix gives the procedures for 3-color effects on Acrilan/Acrilan 16/wool blends. Some problems of relaxing fabrics at the finishing stage are also mentioned.

KINETICS OF DYEING POLYACRYLONITRILE FIBERS WITH BASIC DYES. W. Beckmann. Melliand Textilber. 39, No. 10: 1121-1126 (1958). In German. Through BCIRA 38: 5206 (1958). (896)

The dyeing rate of basic dyes on acrylic fibers was examined by varying the dyeing conditions (temperature, concentration, liquor circulation). It is shown that the absorption rate of dye mixtures and the effect of cationic retarders can be calculated from the empirically found relationships and that it is possible to select dyes which, at any desired mixing ratio, have the same affinity.

DYEING OF RAYON STAPLE FIBER. E. Elöd, D. Bastanier, J. Böckenförde, and J. Nakahara. Melliand Textilber. 39, No. 8: 892-900 (1958). In German. Through BCIRA 38: 5202 (1958). (897)

Relationships between the microstructure of rayon staple fibers and their dyeing behavior are investigated and specific characteristics of various types of rayon staple fiber are shown by using Elöd's "peeling" method. The individual dyes also show differences in their diffusion properties, which must be taken into account in dyeing practice.

SYNTHETIC DYEINGS AND PRINTS. J. Wegmann. Melliand Textilber. 39, No. 9: 1006-1012 (1958). In German. Through BCIRA 38: 5196 (1958). (898)

The linkage between reactive dyes of the dichloro- and monochlorotriazine type and cellulosic fibers by means of homopolar bonds is proved by successful attempts to synthesize the dye within the fiber. Behavior of the dyeings to Cuoxam solutions and stability of the fiber-dye linkage are discussed.

RECENT DEVELOPMENTS IN THE COLORING OF TRIACETATE FIBER FABRICS. Textile Merc. 140: 57-59 (Jan. 9, 1959). (899)

The article covers the use of a mixture of dimethyl terephthalate and benzanilide as a dye carrier; "high temperature, slow dyeing" disperse dyes; improved dye assistants; a dispersing agent for preventing spotty dyeing; and a modified process for dyeing black shades.

APPARATUS FOR DYEING SAMPLES FROM DENSE MATERIAL. G. Menschel. Textil-Praxis 13, No. 8: 839 (1958). In German. Through BCIRA 39: 342 (1959). (900)

The apparatus described consists essentially of means for circulating the dye liquor so as to facilitate its penetration into samples from very dense materials, e.g. felt.

ABSORPTION OF DYES BY CELLULOSE ACETATE FROM NONAQUEOUS MEDIA. C. Heit, M. Moncrieff-Yeates, A. Palm, M. Stevens, and H. J. White, Jr. (Textile Research Inst.). Textile Research J. 29: 6-12 (Jan. 1959). (901)

Results are given for the absorption of 3 disperse dyes by secondary cellulose acetate from solutions in benzene at 25° C and 35° C. Additional results are given on the absorption of one of the dyes from solutions in methanol, butyl acetate, and carbon tetrachloride at 25° C. Formally the isotherms can be well represented by Langmuir's equation. The results obtained using different solvents show that, in general, the solvents do not act as inert transfer media but effect the basic absorption process for the dye. It is shown that the results can be explained if it is assumed that some solvents compete with the dye for absorption sites within the fiber. Tables, graphs, 4 refs.

DYEING OF ZIPPER TAPES. E. Wilhelm. Textil-Praxis (English ed.) No. 4: 189-192 (Dec. 1958). (902)

See abstr. 2986/58.

USE OF PROCION DYES IN CONTINUOUS PROCESSES. R. A. Brindley and I. D. Rattee. Melliand Textilber. 39, No. 9: 1017-1022 (1958). In German. Through BCIRA 38: 5197 (1958). (903)

The application of Procion dyes by single padding methods with simultaneous use of alkali and by two subsequent padding procedures and aftertreatment with alkali is reviewed, with reference to the respective drying installations and the removal of unfixed dye from Procion dyeings.

BASIC REQUIREMENTS IN CONTINUOUS DYEING FOR DIFFERENT DYES. R. B. Vogel and H. Hölters. Melliand Textilber. 39, No. 11: 1243-1246; No. 12: 1365-1368 (1958). In German. Through BCIRA 39: 348 (1959). (904)

Conditions based on the dyeing properties of different dye groups are specified for continuous dyeing installations, and the individual machine components for each continuous process, as well as a universal installation, are described, with reference to continuous processes for substantive, reactive, naphthol, sulfur, and sulfur vat dyes.

PIGMENT DYEING BY THE ACRAMIN FKLN PROCESS. F. Molzer. Textil-Praxis 13, No. 11: 1157-1160 (1958). In German. Through BCIRA 39: 349 (1959). (905)

Acramin FKLN, a very stable emulsion of plastics without solvent, has a better binding power than other binding agents, does not impair the handle or luster of the dyed fabric, and is insensitive to prolonged exposure of the dyeings to light. Applicability of the Acramin FKLN process is discussed, and suitable Acramin dyes (Farbenfabriken Bayer) are listed.

ADSORPTION OF CAUSTIC SODA BY VEGETABLE FIBERS DURING NAPHTHOL AS DYEING. J. Oxé. Textil-Praxis 13, No. 11: 1171-1172 (1958). In German. Through BCIRA 39: 355 (1959). (906)

The alkali absorbability of cotton and bast fibers was studied by treating strands with varying amounts of alkali, squeezing and immersing them in acid, and determining the acid consumption by back titration. The results are presented graphically.

PRODUCTION OF INDANTHRENE PAD DYEINGS WITH EVEN ENDS AND SIDES ON TIGHTLY BEATEN-UP CLOTH QUALITIES (CALCULATION OF THE PADDING LIQUOR CONCENTRATION IN THE JIG FOR MATERIAL NOT PREMERCERIZED AND NOT PRESCOURED). E. Schneider. Textil-Praxis 13, No. 10: 1044-1050 (1958). In German. Through BCIRA 39: 94 (1959). (907)

Causes of shade differences at the ends and sides of dyed pieces are investigated and examples are given to show that it is possible to determine fairly accurately the padding-liquor concentration in the batch for each individual batch, taking into account the amount of dye absorbed subsequently.

VAT DYEING OF COTTON AND VISCOSE PACKAGES. K. J. Bardt (Ciba Ltd). Can. Textile J. 76: 37-43 (Jan. 23, 1959). (908)

Brief review of practical plant approaches to package dyeing. The most common selection of vat dyes generally used in package dyehouses is also briefly discussed. Graphs, diagrs, 5 refs.

COLOR MIXING IN THE DYEHOUSE AND LABORATORY. W. C. Dodson. Textile Bull. 85: 64, 66-70 (Jan. 1959). (909)

Following a brief introduction covering the history of dyeing and early dyes and the various theories of color mixing, the application of the Brewster theory to the mixing of dyes and pigments is explained by means of chromatic circles.

STAR PRINTING PROCESS. F. Viviani. Textil-Rundschau 13, No. 9: 529-532 (1958). In German. Through BCIRA 38: 5220 (1958). (910)

A brief description is given of the process, its applicability, characteristics, and advantages. The process (developed by and protected by a patent of Star, Oltrona S. M., Italy) consists of two working stages: (1) printing on to undeformable carriers (paper, plastic foils, metal, etc.), and (2) simultaneous transfer of all colors (the whole pattern) from the carrier on to the fabric.

FACTORS AFFECTING THE PRODUCTION OF FAST SOLID SHADES ON COTTON PIECE-GOODS. M. R. Fox (Imp. Chem. Inds. Ltd). Dyer 121: 101-108 (Jan. 16, 1959). (911)

The effects of (1) neps composed of dead or immature cotton fibers, (2) abraded or chafed areas, and (3) tension differences in yarns within fabrics on dyeing faults when fast dyes (vat, soluble vat, azoic, sulfur, and reactive dyes) are applied to cotton fabrics are discussed. The importance of careful dye selection and application procedures, as well as proper preparation of fabrics for dyeing, is stressed. Tables.

FUGITIVE DYEING OF ARTIFICIAL AND SYNTHETIC FIBERS. R. de Boissard. Rayonne et Fibres Synthet. 14, No. 10: 1333-1344 (1958). In French. Through BCIRA 39: 100 (1959). (912)

Directions are given for the preparation of dye solutions, their application, and removal, and choice of dyes to be used in fugitive dyeing, for identification purposes, of textile material from artificial and synthetic fibers.

GAS FADING INHIBITORS. K. Naiki. J. Soc. Textile Cellulose Inds. Japan 14, No. 9: 649-655 (1958). In Japanese. Through BCIRA 39: 87 (1959). (913)

This review has 80 references, mainly to U.S. and British patents.

EFFECT OF CREASEPROOFING AGENTS ON LIGHTFASTNESS OF SENSITIVE DYES. H. B. Goldstein and D. N. Koenig (Sun Chem. Corp.). Textile Research J. 29: 66-73 (Jan. 1959). (914)

Three classes of dye which show the greatest sensitivity of lightfastness are the directs, the diazotized and developed, and the new "linkage" or "reactive" type dyes. This paper describes the effects on lightfastness of most of the presently available creaseproofing agents on these 3 classes of dyes. A few selected vat dyes are also included. The data presented should be helpful to mills in selecting creaseproofing compounds for the finishing of dyed and printed fabrics. Tables, graphs, 9 refs.

WHITE AND COLORED RESISTS WITH PIGMENT DYES. S. Matthes and G. Vogel. Melliand Textilber 39, No. 11: 1251-1252 (1958). In German. Through BCIRA 39: 370 (1959). (915)

Directions are given for resist printing with pigment dyes, with special reference to the use of Imperon dyes (Farbwerke Hoechst AG).

PRINTING WITH OREMASIN DYES. H. Werdenberg. Textil-Rundschau 13, No. 9: 527-529 (1958). In German. Through BCIRA 38: 5219 (1958). (916)

These pigment dyes (based on oil-in-water emulsion) can be used in printing of practically all fiber and fabric types. The selection comprises at present 25 dyes in paste form, which can be mixed with each other to obtain any desired intermediate shade. The dyes show good storability in a cool, frost-protected room, but must be stirred up before use. Method of application, properties of Oremasin binders, catalysts, and fixing of the prints are described.

MAGOG STANDARDIZES PRINTING. PART 2. M. Ouellette (Magog Print Works). Textile Inds. 123: 129-130 (Feb. 1959). (917)

The procedure for determining the production standard for a pattern is outlined. Tables, photos.

DEVELOPMENT HISTORY OF THE PRODUCTION OF INSOLUBLE AZO DYES IN PRINTING. A. Wiasmitinow. Textil-Rundschau 13, No. 9: 507-515 (1958). In German. Summary in BCIRA 38: 5217 (1958). (918)

HISTORICAL DEVELOPMENT OF CALICO PRINTING. P. Ulrich. Textil-Rundschau 13, No. 9: 497-506 (1958). In German. Through BCIRA 38: 5216 (1958). (919)

MECHANIZED SCREEN PRINTING METHODS. A. Franken. Textil-Rundschau 13, No. 9: 532-541 (1958). In German. Through BCIRA 38: 5222 (1958). (920)

Semimechanized processes, and various constructions of fully-mechanized screen printing machines are reviewed.

DRYING IN SCREEN PRINTING. A. Franken. Reyon Zellwolle Chemiefasern No. 10: 733-735 (1958). In German. Rayonne et Fibres Synthet. 14, No. 10: 1299-1302 (1958). In French. Through BCIRA 38: 5223 (1958). (921)

It is shown that a 100% drying success cannot be obtained if ventilation of the plant is inadequate. Reference is made to drying in stationary, heated air, by circulated heated air, by circulated predried air, and by radiation heat.

JAPANESE WAX PAPER METHOD FOR PRODUCTION OF SCREEN PRINT STENCILS. R. Künzl and S. R. Jasani. Textil-Praxis 13, No. 8: 843-844 (1958). In German. Through BCIRA 39: 369 (1959). (922)

The thin wax-impregnated paper with good transparency used for this purpose is coated on one side with a composition of 10 parts shellac and 100 parts denatured methyl alcohol, and dried, and several sheets are placed on top of each other, with the shellac side uppermost, and the top sheet bearing the engraved pattern. On pressing the 4 corners of the sheets with a hot iron, the melting wax and shellac stick the sheets together, and the stencil is then cut along the engraved contours through all the paper sheets (8 sheets) simultaneously. The method is particularly favored in conjunction with cotton muslin as screen gauze.

FANCY ROLLER REPOSITIONING TO IMPROVE WOOLEN CARDING. T. W. G. Ashdown and P. P. Townend (Leeds Univ.). Textile Recorder 76: 58-61 (Feb. 1959). (923)

In a previous article (abstr. 2753/57) experiments were described which showed that an increase in carding efficiency could be obtained by placing the fancy roller either underneath the card or in the position normally occupied by the second worker. In the present article, further experiments concerned with the effect of the fancy position on carding power, fettling, and yarn strength, and the optimum fancy position are reported. Tables.

POINTERS FOR SCREEN PRINTING. R. Künzl. Textil-Praxis (English ed.) No. 4: 184-186 (Dec. 1958). (924)

Suggestions for improving the adhesive properties of photo emulsions and for preventing stencils from developing static are given, and a do-it-yourself device for developing, intensifying, and retouching stencils is described.

PHOTON PRINTING ON TEXTILES. H. Schönefeld. Deut. Textiltech. 8, No. 7: 361-363; No. 10: 506-509 (1958). In German. Through BCIRA 38: 5221 (1958). (925)

Photon printing is defined as the production or destruction of dyes or their preliminary and intermediate products by means of actinic light containing its active component in the ultraviolet or visible region of the spectrum. Development and application of the method are discussed.

Mechanical processes D3

NAP-SHEARING: A NEW PROCESS IN FABRIC FINISHING. H. Puder. Deut. Textiltech. 8, No. 9: 467-469 (1958). In German. Through BCIRA 39: 113 (1959). (926)

Various methods of raising and shearing are critically examined and their effect on the finishing process is explained. Reference is made to a combined raising/shearing machine and its construction and advantages are described.

CALENDER ROLLERS WITHOUT CAMBER. Hunt & Moscrop Ltd. Textile Merc. 140: 96 (Jan. 16, 1959). (927)

The "swimming roller" floats on a pressure oil cushion, eliminates camber, and gives an efficient and uniform nip irrespective of the load applied. The Aqua-Roll, which is designed for the water-mangling or squeezing of fabrics, is supported by a cushion of water under pressure. Diagrs.

SELVAGE CUTTING MACHINE. G. Boigs. Textil-Praxis (English ed.) No. 4: 186-189 (Dec. 1958). (928)

The Menschner SRS selvage cutting machine operates on the principle of a surface shearing machine. The operation and construction of the machine are described. Photos, diagr.

Drying, setting, conditioning D4

AUTOMATIC CLOTHES DRYERS: THEIR PERFORMANCE AND EFFECT ON CERTAIN FABRIC PROPERTIES. E. S. Ross and others. U. S. Agri. Research Serv., Washington 25, D. C. Oct. 1958. 28 p. Home economics research report no. 6. Available from Superintendent of Documents, Washington 25, D. C. 20¢. (929)

Automatic clothes dryers, their various design features, and factors affecting performance were investigated in evaluating home drying methods and their effect on fabric properties. Operating characteristics of the dryers were also determined. 17 tables, 7 refs.

TREATMENT OF SYNTHETIC FIBERS AND PLASTIC COATINGS ON FABRICS BY INFRARED IRRADIATION. R. C. Geslin. Reyon Zellwolle Chemiefasern No. 10: 728-732 (1958). In German. Through BCIRA 38: 5234 (1958). (930)

Infrared radiators (short and medium wave-length) are briefly described and their uses for treating plastic coatings on fabrics and for drawing and setting synthetic fibers are reviewed.

HIGH PERFORMANCE JET TENTER. Trockentechnik Kurt Brückner KG. Man-Made Textiles 35: 62 (Feb. 1959). (931)

This tentering, drying, and setting machine, with high capacity jet ventilation, is suitable for finishing cloths made from all natural and manmade fibers. It is supplied with either pins or clips or combined pin/clip chains. The special features of the tenter are described. Photos.

TESTING AND MEASUREMENT E

ASTM STANDARDS ON TEXTILE MATERIALS (WITH RELATED INFORMATION), NOV. 1958. Am. Soc. for Testing Materials, 1916 Race St., Philadelphia 3, Pa. 1958. 858 p. $7.50. (932)

WRAPPING SYSTEMS AND ADJUSTMENTS WITH CRITICAL OBSERVATIONS. T. K. Pattabhiram. Indian Textile J. 69: 86-94, 96 (Nov. 1958). (933)

Systems of sampling and sizing, from pickers through yarn, and adjustments for moisture regain.

Fibers E1

DETERMINATION OF THE DRY WEIGHT IN THE HOT AIR STREAM WHEN ASCERTAINING THE COMMERCIAL WEIGHT. H. Sommer and F. Winkler. Melliand Textilber. 39, No. 10: 1138-1141 (1958). In German. Through BCIRA 38: 5248 (1958). (934)

Since, between the moisture content of the dry air and the residual moisture of the fiber, equilibrium conditions exist even at the usual drying temperatures, it is not possible to determine the 'absolute dry weight' by simple means. The possibility of large variations in the residual humidity of the dried material, due to the moisture content of dry air, makes it necessary to fix a uniform drying temperature, residual-moisture limits, and, to ensure them, a corresponding range for the absolute moisture content of the dry air (suggested as 10 + 38/kg dry air and represented graphically for the temperature range of 15-30° C, together with the permissible relative air humidities).

QUALITATIVE ANALYSIS OF SYNTHETIC FIBERS. I. A. Shikanova and N. M. Sokolova. Tekstil. Prom. 18, No. 5: 57-59 (1958). In Russian. Through BCIRA 39: 123 (1959). (935)

A table is given for the qualitative differentiation between Capron, Enant, Anid, Lavsan, Chlorid (chlorinated vinyl chloride), and Nitron fibers.

MORPHOLOGY OF THE COTTON FIBER. PART 5. ELECTRON-MICROSCOPICAL TESTS ON THIN FIBER SECTIONS. W. Kling, C. Langner-Irle, and T. Nemetschek. Melliand Textilber. 39, No. 8: 879-882 (1958). In German. Through BCIRA 38: 5253 (1958). (936)

An embedding method is described, by means of which it is possible to prepare ultrathin sections of cotton fibers. Electron-microscopical examination of the section confirmed and supplemented previous findings that the cotton fiber has mainly a concentrically lamellar structure, the lamellae being probably daily-growth layers. The individual layers consist of ribbons, the structure of which has already been shown to consist of cellulose fibril bundles. In consequence, loose places occur in the radial direction, which explain the previously-observed forms of enzymic or chemical degradation. In the new slightly improved fiber model resulting from this investigation, the fibril bands, especially in the outer regions of the secondary wall, are arranged in more accurately concentric lamellae.

DETERMINATION OF DAMAGE TO WOOL FIBERS. J. C. Brown (Ciba Clayton Ltd). J. Soc. Dyers Colourists 75: 11-21 (Jan. 1959). (937)

Tests for chemical damage to the wool fiber are classified according to the type of modification measured. Microscopical and staining tests are discussed, and a new test for alkaline damage is described. The swelling of wool fibers in aqueous buffer solutions has been accurately measured using a centrifuge technique under easily reproducible controlled conditions. Rupture of disulfide bonds by alkaline modification has been shown to lead to a rapid increase in percentage swelling, which can be used as a measure of damage. A slight proportional decrease in swelling capacity results from dyeing, and a distinction has been made between neutral-dyeing metal-complex dyes and other types of wool dyes. Chrome dyeings possess greater resistance to alkaline attack than undyed wools. Graphs, photomicrographs, tables, 19 refs.

A METHOD OF EVALUATING SPINNING PERFORMANCE OF COTTON: PRELIMINARY REPORT. F. S. Eddins and S. T. Burley, Jr. U. S. Agri. Mktg. Serv., Washington 25, D. C. Feb. 1959. 11 p. AMS-299. Free. (938)

The method proposed is based on the common knowledge that finer yarn numbers spun from the same cotton under the same organization and conditions produce a greater number of spinning-end breakages per hour. Approximately 10 lb of cotton are required for tests on medium-staple cotton. The test measures a property of cotton that has not heretofore been measured from such a small amount of cotton. Tables, graphs.

FIBER FINENESS MEASUREMENT BY MEANS OF THE PNEUMATIC SOLEX APPARATUS. R. Teich. Melliand Textilber. 39, No. 10: 1080-1082 (1958). In German. Through BCIRA 38: 5249 (1958). (939)

The device described for the pneumatic fineness measurement of fibers operates under constant pressure, in contrast to the constant air quantity used in the air-flow methods. Three measurements are made on each sample. The apparatus is suitable for small plants and can also be used as counter-control of Lanameter measurements.

IDENTIFICATION OF FIBERS BY MEANS OF CHEMICAL REACTIONS. P.-A. Koch and M. Stratmann. Melliand Textilber. 39, No. 10: 1141-1145 (1958). In German. Through BCIRA 38: 5251 (1958). (940)

The behavior of fibers to inorganic and organic solvents is taken as a basis for the identification of these fibers and solubility tables are given, according to which qualitative chemical analysis of manmade fibers can be carried out.

DETERMINATION OF WOOL FIBER MEDULLATION. Textile Inst. J. Textile Inst. 49: P732-P733 (Dec. 1958). (941)

Tentative textile standard no. 53.

Yarns E2

EFFECT OF STAPLE LENGTH AND DENIER OF CHEMICAL FIBERS ON THE IRREGULARITY OF THE YARN AND THE APPEARANCE OF THE CLOTH. W. Wegener and H. Peuker. Reyon Zellwolle Chemiefasern No. 10: 735-743 (1958). In German. Through BCIRA 38: 5268 (1958). (942)

The findings that yarns with constant denier and staggered staple-length exhibit better regularity than yarns with staggered denier and staple-length or those with constant denier and staple-length are confirmed on 3 rayon staple blends both for surface-variation characteristics and appearance of the fabrics. It is also shown that, in spite of its favorable processing properties, a yarn may exhibit a worse length- and area-variation behavior, and impair the appearance of the fabric, on account of its fiber composition. Fibers from the same source may also be blended by staggering the denier so as to obtain the same ideal length-variation curve as that of the mixture to be compared.

SPINNING FAULTS AND THE SPECTROGRAM. H. Locher (Zellweger Ltd). Man-Made Textiles 35: 32-36 (Jan. 1959). (943)

Spinning faults are discussed under the headings: information derived from test data, instrument principles, characteristics of the spectrogram, formulas for periodic faults, nature of drafting waves, tachometer readings, and locating the cause. Diagrs, graphs, 12 refs.

SPINNING FAULTS AND THE SPECTROGRAM. PART 2. H. Locher (Zellweger Ltd). Man-Made Textiles 35: 40-44 (Feb. 1959). (944)

Examples of fault assessment from typical spectrograms for yarns, rovings, and slivers are presented. Twenty-seven spectrograms are reproduced in classified order to illustrate 17 distinct cases of practical fault assessment. Photos, graphs.

DETERMINATION OF COUNT IN PATTERN ANALYSIS. H. McMorran (Scottish Woollen Tech. Coll.). Textile Mfr. 85: 10 (Jan. 1959). (945)

The advantages of the McMorran balance for determining yarn count in small samples of cloth are cited. Photo, diagr.

EXAMPLES FOR LENGTH VARIATION CURVES IN THE CASE OF SIMPLE MATERIAL DENSITIES. W. Wegener and W. Rosemann. Melliand Textilber. 39, No. 8: 844-852 (1958). In German. Through BCIRA 38: 5267 (1958). (946)

In part A, the authors calculate and present the functions CB and CV (length variation curves) and U and Ui (external and internal irregularity curves) for a sinusoidal mass distribution. In part B, a periodical rectangular curve is examined to ascertain the initial behavior of length-variation curves in the case of non-constant material density. The calculated functions CB, U, CV, and Ui differ from those obtained for a constant mass distribution. The length-variation curves in textile fiber systems for small integration lengths were found to show the same relationships as in the case of constant mass distribution.

APPLICATION OF THE MARGIN (RANGE) INTEGRATOR TO THE STUDY OF YARN REGULARITY. A. Barella, R. Audivert, and L. Viertel. Industrie Textile No. 861: 577-585 (Aug./Sept. 1958). In French. Through BCIRA 39: 140 (1959). (947)

The Vieluba margin integrator makes it possible to detect simultaneously short- and long-period irregularities and to plot the variance-length curves. When calculating the former, the values tend, with increasing integration length, to be too high as compared with other methods. The distribution of CV of short yarn lengths is asymmetrical. Comparison with the theoretical Gaussian distribution by means of the Chi-square test shows that, although the theory of normality is not disproved, significant differences are found in certain cases at the threshold of 0.05. The smaller the tested length, the greater is the difference between the CV distribution and the normal distribution. This phenomenon may contribute to the explanation of the relationship between the regularity of yarn and that of fabrics.

MODIFICATION TO THE CALCULATION OF THE B(L) CURVE BY THE INERT TEST METHOD. J. Grignet and F. Monfort. J. Textile Inst. 49: P706-P723 (Dec. 1958). (948)

The use of the "inert test" position of the Zellweger-Uster regularity meter has been proposed by Grosberg and Palmer as a method of determining the B(L) curve of the yarns. The circuit for the quadratic integrator, which is mentioned by these authors, is a theoretical circuit, and differs from the actual circuit of the Zellweger integrator. In this paper, the effect which this difference of circuit has on the calculations and on the results (i.e. the effect on the B(L) curve obtained) is examined, and a new procedure to be followed in making the test is proposed. The significance of the measurements made in the "normal test" conditions is also examined, and a method for the measurement of certain of the circuit constants is described. Diagrs, table, graph, 3 refs.

WEAR RESISTANCE OF SHOE LACES. J. Kiger and J. Rannou. Industrie Textile No. 861: 601-603 (Aug./Sept. 1958). In French. Through BCIRA 39: 142 (1959). (949)

An apparatus and method are described for determining the wear resistance of shoe laces made from cellulosic and polyamide fiber yarns. The results obtained are tabulated.

DESIGN AND CONSTRUCTION OF A VIBRATING STRING EVENNESS TESTER FOR TEXTILE YARNS. B. G. Leary. Instrum. Pract. 12, No. 11: 1179-1187 (1958). Through BCIRA 39: 139 (1959). (950)

A detailed description is given of the CSIRO yarn evenness tester. This instrument tests a continuously moving length of yarn, and the principle of operation used is that of setting the yarn in transverse vibration at its fundamental resonant frequency. Measurement of this frequency enables a continuous indication of linear density to be obtained.

CORRECTING YARN NUMBER FOR REGAIN. S. D. George (Intern. Eng. Associates). Textile Inds. 123: 111-112 (Feb. 1959). (951)

When standard conditions do not exist, the recorded yarn number must be corrected to determine the equivalent yarn number under standard atmospheric conditions (70° F, 65% rh). A nomogram for correcting the yarn number is given.

METHOD AND APPARATUS FOR MEASURING THE TORSIONAL MOMENT OF YARNS AND TWISTS. E. Sebestyen. Rayonne et Fibres Synthet. 14, No. 10: 1321-1332 (1958). In French. Through BCIRA 39: 141 (1959). (952)

Methods for determining the torsional moment in crepe yarns (by oscillation, detwisting, counting the loops) are reviewed and a "mechanical torsiometer" is described, which is based on the following principle: under the action of the torsional moment accumulated in the yarn, a spring is drawn out until an equilibrium state is reached between the torsional moment of the thread and that of the spring. The apparatus indicates the torsional moment of the thread or spring with an accuracy of 1 mm/mg. Results from experiments carried out on a test length (rayon) of 250 mm (10 measurements per sample) are evaluated, taking into account factors affecting the torsional moment (relative air humidity, temperature of air, density of the yarn layers on the bobbin).

Fabrics E3

APPARATUS FOR DETERMINING THE CAPILLARITY OF FABRICS. A. N. Braslavskii. Tekstil. Prom. 18, No. 5: 53-55 (1958). In Russian. Through BCIRA 39: 155 (1959). (953)

The apparatus and method described for measuring the absorbability of a porous fabric (e.g. filter-cloth) can be used both in laboratories and in plants.

DETERMINATION OF THE INITIAL FABRIC STRENGTH. O. Oldenroth. Textil-Praxis 13, No. 8: 808-809 (1958). In German. Through BCIRA 39: 434 (1959). (954)

Changes in the tensile strength after the first machine launderings, without noticeably-altered wear properties of the fabric, are due to processing factors (spinning, weaving, finishing). It is shown that, for the evaluation of fabric properties after washing treatments, it is essential to base the determination of the change in fabric strength on its initial strength value. The use of values determined after 2 to 3 machine launderings is recommended as a criterion for the percentage change in strength.

DETERMINATION OF THE AMOUNT OF SILICA ON TEXTILE MATERIALS. G. D. Nessonova, D. V. Turkovskaya, and E. D. Mosolova. Tekstil. Prom. 18, No. 1: 55 (1958). In Russian. Through BCIRA 38: 5285 (1958). (955)

The fabric sample (0.5/1.5 g) in a 100-150 ml beaker is wetted with 10-15 ml concentrated nitric acid, and 10-15 ml concentrated sulfuric acid (d. 1.83-1.84) are then carefully added over 10-15 min. The mixture is stirred by means of a glass rod which is left in the beaker and, in order to accelerate the reaction, heated to boiling until completely clear and free from nitrogen oxides, adding 1-2 ml nitric acid if the solution remains dark. After cooling the solution and adding 75-100 ml water, the deposit is immediately filtered off and washed 2-3 times with hot water (containing 2 ml hydrochloric acid/1 l. water) to avoid decomposition due to prolonged contact with the acid-containing solution, and once or twice with hot water alone. The filter-paper with the residue is transferred into a crucible and calcined at 800-850° C to constant weight (30-40 min). The whole analysis can be carried out in 2 hr.

USE OF RADIOACTIVE ISOTOPES IN STUDYING THE FORMATION AND STRUCTURE OF A FABRIC. P. V. Vlasov. Tekstil. Prom. 18, No. 1: 29-31 (1958). In Russian. Through BCIRA 38: 5277 (1958). (956)

Experiments were carried out by determining the radioactive absorption of P^{32} and I^{128} particles by cotton, wool, silk, Capron, and other fabrics treated with various finishing agents. It was found that the intensity of the radioactive radiation during passage of the electrons varies with the fabric structure and can be recorded by means of the apparatus described, consisting essentially of an ionization chamber and a counter. The radiographic method was also used to study the deformation of the yarn during fabric formation on the loom.

ATMOSPHERIC POLLUTION AND THE SOILING OF TEXTILE MATERIALS. W. H. Rees. Brit. J. Appl. Phys. 9, No. 8: 301-305 (1958). Through BCIRA 38: 5274 (1958). (957)

The author first discusses the factors which influence the soiling of textile materials by airborne dirt; a method for measuring and expressing the extent of soiling is described. An account is then given of the soiling of textile fabrics by exposure to moving air, by thermal precipitation, and by electrostatic attraction of airborne particles. The effect of fabric wettability on the appearance of a cotton fabric soiled by exposure to a damp polluted atmosphere is mentioned. Finally, the designation of air dirtiness by means of the 'murk' unit and the measurement of murk values are dealt with.

Other E4

CHEMICAL ANALYSIS IN THE TEXTILE INDUSTRY. J. M. Bather (B.C.I.R.A.). Dyer 121: 181-183 (Jan. 30, 1959). (958)

The application of chemical analysis to the evaluation of defects in textiles arising from processing and from contamination is described.

STUDY OF THE SPECTRAL DEPENDENCE OF THE FADING OF DYED TEXTILES. R. E. Bedford (Nat. Research Coun., Ottawa). J. Soc. Dyers Colourists 75: 37-44 (Jan. 1959). (959)

A method for calculating the contributions of various spectral regions of light in causing fading is described, and results are given for 3 dyed samples. The materials were exposed to sunlight plus skylight, for which the spectral energy distribution is rather well known, behind a set of colored filters. Fading was measured as an actual color change by means of the Hunter color-difference meter. A set of simultaneous equations is set up whose solution gives the relative efficiencies of the various regions in producing fading. A comparison of various equations to describe fading is also made. Graphs, tables, 15 refs.

EVALUATION OF THE EFFECTIVENESS OF ANTIBACTERIAL FINISHES FOR CLOTH. P. A. Majors (Hill Top Research Inst.). Am. Dyestuff Reptr. 48: P91-P93 (Feb. 9, 1959). (960)

The antibacterial activity imparted to cotton cloth by treatment with varying concentrations of phenyl mercuric acetate, benzalkonium chloride, or trichlorocarbanilide (TCC) was determined by a method which closely parallels actual use conditions. The method is based on the determination of titratable acid or alkali produced by the growth of the test organism in a highly buffered medium containing urea or glucose and held in the interstices of the test fabrics. Tables, 3 refs.

MEASUREMENT OF COLORFASTNESS TO STEAM PLEATING. Soc. Dyers & Colourists: Pleating Fastness Subcommittee. J. Soc. Dyers Colourists 75: 31-37 (Jan. 1959). (961)

A suitable method for testing the fastness of colored textiles to steam pleating processes has been devised. There is good correlation between the results of the test and those produced in practical pleating. A simple piece of apparatus has been designed to maintain close and even contact between the test pattern and adjacent undyed fabrics. Any staining of these adjacent fabrics takes place uniformly, and reliable assessment of the degree of staining can be made. A range of steaming conditions has been chosen to cover all fibers. The test has been adopted as an ISO Tentative Test, the only modification being the addition of two extra steaming conditions. Tables, diagrs.

WATER CONTENT OF TEXTILES AND INFRARED REFLEXION. K. Hoffmann, L. Schlamp, and F. Gläser. Melliand Textilber. 39, No. 10: 1157-1160 (1958). In German. Through BCIRA 38: 5247 (1958). (962)

The experiments were carried out on wool, linen, paper, and leather by determining their reflectance curves using a recording Beckmann spectrophotometer DK1 with a reflexion supplement. Dependence of the reflexion upon the water content and nature of the material is discussed, the construction of the apparatus and the method are described, and comparison is made with other known moisture-measuring methods.

IDENTIFICATION OF DYESTUFF CLASSES. PART 4. POLYAMIDE FIBERS: NYLON 6 AND 66. PART 5. ACRYLIC FIBERS: ACRILAN, DYNEL, ORLON, ETC. PART 6. POLYESTER FIBERS: TERYLENE AND DACRON. D. A. Shiraef (Gen. Aniline & Film Corp.). Fibres 20: 56-58 (Feb. 1959). (963)

METHOD FOR THE DETERMINATION OF CONDUCTIVITY, pH, WATER-SOLUBLE MATTER, CHLORIDE, AND SULFATE IN AQUEOUS EXTRACTS OF TEXTILE MATERIALS. Textile Inst. J. Textile Inst. 49: P724-P731 (Dec. 1958). (964)

Tentative textile standard no. 52.

METHOD FOR THE DETERMINATION OF THE RELATIVE VISCOSITY OF NYLON 6.6 IN 90% FORMIC ACID. Textile Inst. J. Textile Inst. 49: P734-P737 (Dec. 1958). (965)

Tentative textile standard no. 54.

SPACING OF THE BLUE LIGHTFASTNESS STANDARDS. L. F. C. Friele (Vezelinstituut T.N.O.). (Letter to the editor). J. Soc. Dyers Colourists 75: 44-45 (Jan. 1959). (966)

LOCATION OF THE RESINOUS PRODUCT. J. T. Marsh. Textile Mfr. 85: 35-39 (Jan. 1959). (967)

The difficulties involved in the use of staining techniques for determining the location and distribution of resins used in the creaseproofing process are discussed with pertinent literature references.

XENON BURNER XE 1500 AS RADIATION SOURCE FOR LIGHTFASTNESS TESTS. H. Toepffer. Melliand Textilber. 39, No. 11: 1246-1251 (1958). In German. Through BCIRA 39: 442 (1959). (968)

The Xeno test makes it possible to obtain results which correspond to a great extent to those obtained under practical conditions. Differences between daylight exposure and the Xeno test are due to the fact that, in the latter, the ultraviolet component is constant, whereas this component varies in daylight and is only partially effective behind window glass. The natural humidity conditions can be adjusted in the Xeno test. The possibility of carrying out weathering tests under the same light source is pointed out.

MILL MANAGEMENT F

MACHINE MODERNIZATION. S. I. Rudo (Werner Textile Consultants). Textile Inds. 123: 93-95 (Feb. 1959). (969)

The why, when, and how of modernizing are discussed.

CONTINUOUS SYSTEM OF MODERNIZATION. Textile Inds. 123: 96-99 (Feb. 1959). (970)

A system used by the Fitchburg Yarn Mills for replacing equipment is described. Photos.

FIFTY-MILL SURVEY ON WHAT MILLS ARE DOING ABOUT SUPERVISORS. Textile World 109: 53-62 (Feb. 1959). (971)

Changing patterns in supervision, p. 54; How supervisory practices compare in different mills, p. 55-57; What mills say about selection and training, p. 58-62. Chart.

HOW TO CONTROL LABOR COSTS. R. C. Allen (Bruce Payne & Associates, Inc.). Textile Inds. 123: 132-139 (Feb. 1959). (972)

The cost control technique described summarizes information from daily time sheets for each worker and from payroll records onto a departmental control sheet. Reasons for cost variations may quickly be spotted. The technique is summarized and illustrated by 4 forms.

SAFETY IN MACHINES AND METHODS FOR THE TEXTILE INDUSTRY. F. H. Drewes. Textile Mfr. 85: 3-5 (Jan. 1959). (973)

The author discusses the role of management and employees in establishing and maintaining a safety program, the use of monthly accident reports, and the organization of safety committees.

PROFIT LIFE OF TEXTILE MACHINERY. M. B. Andrews. American Textile Machinery Assoc., P.O. Box 596, Vienna, Va. 1958. 72 p. Free. (974)

This report describes many newly developed textile machines and machine improvements and refinements and emphasizes the necessity for recognition of the profit life of textile machinery through adequate depreciation rates. The report also points up the need for total modernization and planned machine replacement over the years if a textile mill is to remain in business.

MANAGEMENT PROBLEMS IN THE WOOL TEXTILE INDUSTRY. PART 2. PROBLEMS OF INTRODUCING WORK STUDY. W. R. Seddon and W. Steel (Urwick, Orr & Partners Ltd). Fibres 20: 61-64 (Feb. 1959). (975)

The preparation necessary to help employees accept work study, the selection and training of study officers, and what the work study technique can achieve are discussed.

Industrial engineering F1

WORK STUDY AS AN AID TO COMPETITIVE EFFICIENCY. G. H. Jolly. Textile Weekly 59(1): 201-204 (Jan. 23, 1959). (976)

The applicability of work study measurements to cost reduction is discussed, and the use of the method improvement aspects of work studies for improving processing conditions is illustrated with examples.

INTRODUCTION TO CONTROL TECHNOLOGY. O. König. Textil-Praxis 13, No. 11: 1150-1156 (1958). In German. Through BCIRA 39: 447 (1959). (977)

Principles and mechanisms of various regulating systems are described.

ELECTROMAGNETIC RELAY AS AN AID IN MACHINE CONTROL. R. Möbus. Textil-Praxis 13, No. 11: 1148-1150 (1958). In German. Through BCIRA 39: 448 (1959). (978)

Various relay systems are reviewed, and their uses indicated.

PREPLANNING FOR ELECTRONIC INVENTORY CONTROL. A. James (Teleregister Corp.). Automation 6: 70-74 (Feb. 1959). (979)

Factors to be considered in installing data-system improvements are demonstrated. It is shown how the review of data-flows preparatory to data systems installation may yield savings through procedures improvements, even before the electronic equipment itself is installed. Diagrs.

QUALITY CONTROL. 3d ed. N. L. Enrick (Inst. of Textile Technology). Industrial Press, New York. 1959. 184 p. $4.50. (980)

This third edition maintains the original character of the book described in the subtitle: Manual of quality control procedure based upon scientific principles and simplified for practical application in various types of manufacturing plants. Extensive revisions have been made of the chapters on tolerances and allowances, while the material on control charts and variance analysis has been enlarged.

AMERICAN SOCIETY FOR QUALITY CONTROL, MIDDLE ATLANTIC CONFERENCE TRANSACTIONS, 1958. 275 p. Available from American Soc. for Quality Control, Room 6197 Plankinton Bldg, 161 W. Wisconsin Ave., Milwaukee 3, Wis. $2.50. (981)

The following papers of textile interest are included: Study of a textile mill with the aid of linear programming, by K. Eisemann and W. M. Young, p. 9-20; Quality control in the garment industry, by R. G. Mitchell, p. 253-265; Upgrading and uptrading quality, by S. I. Rudo, p. 267-271.

FINITE QUEUING TABLES. L. G. Peck and R. N. Hazelwood. John Wiley & Sons, New York. 1958. 210 p. $8.50. (982)

Tables, computed on Univac, and useful for calculating expected machine interference in multi-machine assignments, such as on looms.

ON THE OPTIMAL INVENTORY POLICY IN THE CASE OF A KNOWN ANNUAL DEVELOPMENT OF DEMAND. A. Klingst (Osterreichische Stickstoffwerke AG). Unternehmensforschung 2, No. 1: 16-19 (1958). In German. (983)

Develops a graphical construction of the optimal interval between orders, based on inventory carrying costs and losses incurred in being unable to supply a particular item within a unit time. Graphs.

Plant and equipment F2

SACO-LOWELL HANDBOOK. v. 4. ENGINEERING AND TECHNICAL DATA. 5th ed. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. 1958. 504 p. $15.00. (984)

Technical information relating to the various machines manufactured by Saco-Lowell Shops for the textile industry.

CONDENSATE DRAINAGE SYSTEMS. R. J. Lundrigan (Cochrane Corp.). Textile Bull. 85: 70-72 (Jan. 1959). (985)

The operation of condensate drainage systems is described, and some practical examples are given. Photo, diagrs, graph.

CONTROL OF DUST AND FLY, ETC., IN TEXTILE PROCESSES. PART 1. F. H. Slade. Textile Mfr. 84: 169-173 (Apr. 1958). (986)

General control, local control, and control in the opening room and the cardroom are discussed. For parts 2 and 3 see abstr. 3053/58 and 4286/58. Photos.

STANDARD ACCESSORIES FOR TEXTILE MACHINERY. A. F. B. Nall. J. Textile Inst. 49: P657-P660 (Nov. 1958). (987)

Comments are made on work on standards for textile machinery, particularly spinning and weaving accessories.

LIGHTING FOR INSPECTION. W. Allphin (Sylvania Elec. Prods. Inc.). National Convention Trans. ASQC 12: 263-271 (1958). (988)

Problems of lighting for inspection, including textile applications such as evaluation of metameric pair phenomena in cloth samples. Graphs, photos.

SCIENCES G

Chemistry G1

FIBROUS POLYMERS. R. W. Moncrieff. Fibres 20: 46-48, 68 (Feb. 1959). (989)

The various methods of polymerization used in fiber manufacture (e.g. condensation, addition, copolymers, graft, block, isotactic) are reviewed.

MECHANISM OF COTTON DETERGENCY. R. D. Stayner. Oronite Chemical Co., 200 Bush St., San Francisco 20, Calif. 1958. 13 p. Free. (990)

An analysis of the factors involved in cotton detergency and an evaluation of the relative importance of each of these factors in the cleaning process.

DETERGENT ADSORPTION ON SOIL AND SUBSTRATE. PARTS 3 AND 4. J. C. Harris (Monsanto Chem. Co.). Soap Chem. Specialties 35: 49-52, 108-110 (Jan. 1959); 57-58, 103-104 (Feb. 1959). (991)

A review. For previous parts see abstr. 251/59. Table, refs.

Physics G2

USE OF SMALL CAPACITANCE METER IN THE TEXTILE INDUSTRY. B. Ichijo, T. Arai, T. Hayashi, and T. Daimon. J. Textile Machy. Soc. Japan 4: 61-70 (Dec. 1958). (992)

This article describes the principle of a capacitance measuring circuit which uses two double resonant circuits. This circuit can be used to measure very small capacitance, and as a direct-reading capacitance meter it is least susceptible to the effect of the resistance component of the specimen. Photos, diagrs, graphs, 5 refs.

USE OF RADIOACTIVE ISOTOPES IN THE TEXTILE INDUSTRY. E. Frieser. Rayonne et Fibres Synthet. 14, No. 9: 1157-1181 (1958). In French. Through BCIRA 39: 118 (1959). (993)

In this review, the author enumerates radioactive isotopes used in textile technology and discusses their effect on fibers (cotton, viscose and cellulose acetate, wool, polyamide, polyacrylonitrile, polyester, Teflon, and other textile fibers) and their application in spinning, dyeing, printing, finishing, thickness measurement, etc. 39 refs.

MISCELLANY H

TEXTILE RESEARCH ACHIEVEMENTS IN 1958. PART 1. J. B. Goldberg. Textile Inds. 123: 105-108 (Feb. 1959). (994)

HOMEMAKERS APPRAISE COTTON, WOOL, AND OTHER FIBERS IN HOUSEHOLD FURNISHINGS. D. B. Levine. U. S. Agri. Mktg. Serv., Washington 25, D.C. Nov. 1958. 100 p. Mktg. research report no. 279. Available from Superintendent of Documents, Washington 25, D.C. 55¢. (995)

JAPANESE COTTON TEXTILE INDUSTRY, 1945-1955. A. D. Walton. J. Textile Inst. 49: P696-P705 (Dec. 1958). (996)

The steps by which the Japanese cotton industry has been revived since the war, the difficulties which have been encountered, and those which face the industry after the first postwar decade are reviewed. Tables, 35 refs.

TEXTILE INDUSTRIES OF ASIA: SURVEY OF LABOR CONDITIONS. E. Thornton. Textile Weekly 59(1): 263-264, 266, 271 (Jan. 30, 1959). (997)

CONTRIBUTION OF BRITISH INVENTION TO THE MANMADE FIBER INDUSTRY: VISCOSE RAYON. Man-Made Textiles 35: 68-70 (Jan. 1959). (998)

LOWELL TECHNOLOGICAL INSTITUTE: GRADUATE THESES 1946-1958. Bull. Lowell Technological Inst. Series 62, No. 2: 3-10 (Nov. 1958). (999)

A bibliography of titles of theses done during 1946-1958 by graduate students at Lowell Technological Institute, Lowell, Mass. Entries are classified under the headings chemistry, engineering, and textile manufacturing.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

PATENTS: FIBERS
Abstr. 1000 - 1004

PATENTS: YARN PRODUCTION
Abstr. 1005 - 1008

FIBERS A

Natural fibers A1

APPARATUS FOR HUMIDIFYING SEED COTTON. O. Mitchell and W. P. Freeman, Jr. (to John E. Mitchell Co.). USP 2 867 851, Jan. 13, 1959. (1000)

Apparatus for supplying moisture to cleaned cotton before it is delivered to the gin.

SEPARATION OF FIBERS FROM FIBROUS PLANTS. R. H. Turnbull (England). USP 2 871 163, Jan. 27, 1959. (1001)

In the separation of bast fibers, a cytase-containing liquor is extracted from the particular plant containing the fiber in question, and the fiber-containing portions of the plant are crushed and treated with the cytase-containing liquor for one to four days at 30° to 60° C to effect pectin decomposition.

Manmade fibers A2

METHOD OF ROUGHENING AND PULLING POLYETHYLENE TEREPHTHALATE FIBERS. E. Siggel (to Vereinigte Glanzstoff Fabriken AG). USP 2 861 865, Nov. 25, 1958. (1002)

The fibers, while still warm and containing solvents from the spinning bath, are conducted through an after-treatment bath in order to extract the solvents from the outer layer of fiber. The residual solvent is expelled by the action of superheated steam.

FIBERS MADE FROM MIXTURES OF POLYMERS. H. J. White, Jr., and D. M. Cates (to Textile Research Inst.). USP 2 868 744, Jan. 13, 1959. (1003)

Fibers made up of an intimate molecular mixture of from 5 to 95% of a cellulose derivative and from 95 to 5% of a hydrophobic polymer, e.g. polyacrylonitrile or vinyl chloride, are claimed.

TERPOLYMER FIBERS. A. T. Walter (to Union Carbide Corp.). USP 2 868 756, Jan. 13, 1959. (1004)

Terpolymer fibers of acrylonitrile, vinyl chloride, and vinylidene chloride are claimed.

YARN PRODUCTION B

PROCESS FOR TREATING PRODUCTS HAVING A LOW ELECTRIC CONDUCTIVITY TO REDUCE THEIR TENDENCY TO ELECTROSTATIC CHARGING. NV Onderzoekingsinst. Research. BP 803 174, Oct. 22, 1958. (Addition to BP 791 476). Through BCIRA 38: 5164 (1958). (1005)

To improve the resistance to rubbing of the antistatic dressing claimed in the parent specification, the "polymer containing a number of carboxyl or sulfonic acid groups" is mixed with a quaternary alkylammonium compound and/or a polyalkylene polyamine. Four examples relate to fabrics of the nylon type and another to the treatment of nylon fiber for carding.

DRAFTING ROLLS. SKF Kugellagerfabriken GmbH. BP 804 843, Nov. 26, 1958. Through BCIRA 39: 290 (1959). (1006)

Drafting roll, that can be easily cleared of dust and fluff, comprises a shell mounted at the end of a shaft in such a way that it is restrained by a pin against rotation relative to the shaft but free to move along it. The shell is urged towards its operative position by means of a spring lying between stops on the shaft and the shell, respectively. By displacing the shell against the spring, the space between the housing for the bearings and the shell becomes accessible for cleaning.

APPARATUS FOR CONTINUOUS PRODUCTION OF LIQUID-TREATED CRIMPED FIBERS. S. M. Wheelock (to Pacific Mills). USP 2 867 005, Jan. 6, 1959. (1007)

PROCESS OF MAKING YARN. R. C. Wilkie (to Pacific Mills). USP 2 867 077, Jan. 6, 1959. (1008)

The system includes forming fibers into sliver, collecting the sliver into coils around a central opening, compressing the coils into packages 20 to 26% of their original height, reducing the sliver in one drafting operation to roving, coiling and compressing the roving in the same manner as used for the sliver, and spinning the roving into yarn with a draft of 25 to 600, as required by the yarn count desired. Objects of the system are (1) to provide an economical universal system for natural or manmade fibers or blends, (2) to provide a process with a minimum number of operating steps, and (3) to provide a system in which only one weight of roving is used to make a wide range of yarn sizes.

APPARATUS FOR LONGITUDINALLY FEEDING A MULTIFILAMENT, CONTINUOUS GLASS FIBER STRAND. R. G. Russell (to Owens-Corning Fiberglas Corp.). USP 2 868 358, Jan. 13, 1959. (1009)

High speed rotary pulling wheel for attenuating a multifilament glass fiber strand and feeding it along a desired pathway.

YARN HEATING APPARATUS FOR FALSE TWIST CRIMPING. P. van Dijk (to Am. Enka Corp.). USP 2 869 312, Jan. 20, 1959. (1010)

TOP DRAFTING ROLL CARRIER ADJUSTMENT. E. Dausch (to SKF Kugellagerfabriken GmbH). USP 2 870 487, Jan. 27, 1959. (1011)

Automatic means for mounting and guiding top roll carriers for shifting movement along the arm.

Opening, picking, fiber preparation B1

COTTON FIBER CLEANER. M. Mayer, Jr. and J. I. Kotter (to U. S. Secy. Agri.). USP 2 867 850, Jan. 13, 1959. (1012)

APPARATUS FOR CLEANING WOOL. E. Portanger (New Zealand). USP 2 869 181, Jan. 20, 1959. (1013)

In an apparatus for removing waste matter from wool, the cleaned wool is floated into a receiving chamber by means of an air stream, while the dirty or partially cleaned wool, which sinks more rapidly, is subjected to more cleaning action.

Carding and combing B2

SLIVER FAULT DETECTING DEVICE FOR CARDING ENGINES. Allen Priest & Sons Ltd. BP 804 581, Nov. 19, 1958. Through BCIRA 39: 289 (1959). (1014)

Fluctuations in weight per unit length of the sliver are detected by means of a rocking arm over which the sliver runs.

GUIDING MEANS FOR WOOL CARDING OR CONDENSING RUB APRON. A. L. Freedlander (to Dayton Rubber Co.). USP 2 870 490, Jan. 27, 1959. (1015)

Drawing and roving B3

ROVING MACHINE FLYER. R. Richter (Germany). USP 2 867 970, Jan. 13, 1959. (1016)

Flyer nose cap with a grooved surface which causes the retention of the roving for a sufficient time to increase its twist.

DRAFTING ROLL COVER. J. Rockoff (to Dayton Rubber Co.). USP 2 870 489, Jan. 27, 1959. (1017)

Cover resistant to lapping up, eyebrowing, and abrasion is composed of a synthetic rubber composition in which are incorporated particles of blown sponge rubber near the working surface of the roll.

TOP ROLL SUPPORT AND WEIGHTING. W. W. Werth (to Whitin Mach. Works). USP 2 870 488, Jan. 27, 1959. (1018)

Means for supporting the front top roll, for firmly clamping and forcing down the front and middle top rolls during operation, and for adjusting the pressure on these top rolls.

ROVING FRAME BUILDER MECHANISM. C. W. Hill and D. B. Hopkinson (to Saco-Lowell Shops). USP 2 870 597, Jan. 27, 1959. (1019)

A modified American builder mechanism is used to obtain a roving package of greater volume than is usual by the use of a taper on the bottom end of the package much steeper than that at the top.

Spinning, winding, twisting B4

RING SPINNING MACHINE VARIABLE SPEED CONTROL. G. E. M. Sagehomme (Belgium). BP 803 590, Oct. 29, 1958. (Addition to BP 724 122). Through BCIRA 39: 293 (1959). (1020)

Speed selection device for a ring frame so driven that the speed of the ring, relative to that of the building motion, is the sum of a constant speed and a variable speed dependent on the diameter of the package, thus securing constant winding-on speed.

SPINNING MACHINE FRAME. A. W. Stafford (to T. M. M. (Research) Ltd). BP 804 224, Nov. 12, 1958. Through BCIRA 39: 292 (1959). (1021)

Skeletal structure for the framework of a spinning or like machine in which unit vertical frames are held together by diagonal struts and by longitudinal members that serve as ring or spindle rails.

AUTOMATIC SPEED CONTROL MECHANISM FOR RING SPINNING SPINDLES. A. Pellizzari & Figli SpA. BP 804 567, Nov. 19, 1958. Summary in BCIRA 39: 295 (1959). (1022)

AUTOMATIC ELECTRIC CONTROL OF THE FEED MECHANISM OF A FANCY DOUBLER. Berliner Maschinenbau AG. BP 804 614, Nov. 19, 1958. Summary in BCIRA 39: 299 (1959). (1023)

BOBBIN HOLDERS. Luwa AG. BP 804 825, Nov. 26, 1958. Summary in BCIRA 39: 321 (1959). (1024)

SPINNING MACHINE FLYER. A. Schüssler (to VEB Spinnereimaschinenbau Karl-Marx-Stadt). BP 805 267, Dec. 3, 1958. Through BCIRA 39: 291 (1959). (1025)

The lower ends of the flyer are pivotally fixed in a ball race so that the flyer can rock about an axis at right angles to its axis of rotation.

BOBBIN INSPECTING DEVICE FOR CHECKING THE COMPLETENESS OF A BOBBIN STRIPPING OPERATION. R. Ferguson (to Terrell Mach. Co.). USP 2 868 372, Jan. 13, 1959. (1026)

DEVICE FOR CONSTRICTING THE BALLOON IN RING SPINNING AND DOUBLING FRAMES. E. Ebenauer (Germany). BP 805 271, Dec. 3, 1958. Through BCIRA 39: 296 (1959). (1027)

Constricting hoop is mounted at an adjustable height on two legs that stand up from an annular disc fixed to the ring rail.

RING SPINNING DRIVE. J. G. Winterbottom (to English Elec. Co. Ltd). BP 805 341, Dec. 3, 1958. Through BCIRA 39: 294 (1959). (1028)

The drive includes two motors for providing different speeds according to which of the two is energized. The motor giving the higher speed is coupled through separate power transmission means to the frame and to the other motor, respectively.

DOUBLING MACHINE STOP MOTION. C. Warrington (to Tweedales & Smalley Ltd). BP 805 434, Dec. 3, 1958. Through BCIRA 39: 298 (1959). (1029)

Mechanism that permits any one or more of the stop motions (for preventing the continued feeding of a yarn when its companion fails) to remain in the operative position when the mechanism is moved so as to retain the others in the inoperative position.

DRAFTING ROLL COVER. D. A. Meyer (to Dayton Rubber Co.). USP 2 863 175, Dec. 9, 1958. (1030)

Cover, resistant to lapping up and eyebrowing, consists of a synthetic rubber composition in which are embedded small, smooth-surfaced particles of a fused siliceous material.

ANTIFRICTION TOP ROLL. L. W. Pray (to Saco-Lowell Shops). USP 2 867 006, Jan. 6, 1959. (1031)

Antifriction top roll which may be easily disassembled for periodic lubrication of the antifriction bearings and then quickly reassembled, all without the use of special tools.

DOFFING APPARATUS FOR SPINNING MACHINE. R. B. Newton (to Whitin Mach. Works). USP 2 867 074, Jan. 6, 1959. (1032)

Apparatus for raising and swinging away the 2 antiballoon rings and an associated yarn guide from the full bobbins to permit doffing.

BALLOON CONSTRICTING HOOP FOR RING SPINNING FRAMES. E. Reissmuller (to Hermann Ebenauer & Co.). USP 2 867 075, Jan. 6, 1959. (1033)

The hoop is carried by support legs fixed to a flat circular ring which is fixed in place on the ring rail under the spinning ring.

TWISTING SPINDLE BALLOON CONTROL. A. W. Vibber. USP 2 869 314, Jan. 20, 1959. (1034)

In a multiple-spindle twisting system, a predetermined fixed tension is applied to the material in the variable supply, so that the balloon is subjected to the same tension.

SPINNING RING LUBRICATION. H. B. Atwood (to Herr Mfg. Co.). USP 2 867 076, Jan. 6, 1959. (1035)

The lubricant is supplied intermittently and under pressure to a spinning ring having a capillary passage terminating at the bearing surfaces. The lubrication is continued by capillary action alone when no pressure is applied.

TOP DRAFTING ROLL SUPPORT FOR SPINNING MACHINES. E. Dausch (to SKF Kugellagerfabriken GmbH). USP 2 867 852, Jan. 13, 1959. (1036)

APPARATUS FOR MAKING YARN. E. W. Starnes. USP 2 867 967, Jan. 13, 1959. (1037)

Combined yarn attenuating and two-for-one twisting apparatus in which the yarn may be made either directly from sliver or from roving.

WHORL AND THREAD STORAGE DEVICE FOR CABLING SPINDLES. K.-H. Rehn (to Barmer Maschinenfabrik AG). USP 2 867 968, Jan. 13, 1959. (1038)

TWO-FOR-ONE TWISTER. J. Beyer (to Am. Enka Corp.). USP 2 867 969, Jan. 13, 1959. (1039)

The twister eliminates the usual takeup disc and makes use of a freely rotating thread guide, in the form of a flyer, concentrically mounted around the spindle.

BALLOON CONTROL FOR PLYING APPARATUS. A. W. Vibber. USP 2 869 313, Jan. 20, 1959. (1040)

In an apparatus for twisting two strands together to form a two-ply cord by ballooning a strand from one letoff package around a second letoff package, the plying takes place adjacent the apex end of the balloon in order to better control the balloon size.

SPINNING APPARATUS UTILIZING A TWO-FOR-ONE SPINNING SPINDLE. N. E. Klein (to Deering Milliken Research Corp.). USP 2 869 315, Jan. 20, 1959. (1041)

The apparatus is made up of a drafting frame and a 2-for-1 twister which receives a strand at the base of a rotatable spindle for passage to a balloon driving mechanism.

SPINDLE ENDLESS BELT TYPE DRIVING MECHANISM. H. Schurr and H. Stahlecker (to Württembergische Spindelfabrik GmbH). USP 2 869 317, Jan. 20, 1959. (1042)

RING SPINNING AND TWISTING MACHINES. A. J. Eidlow, M. Markowicz, and D. I. Morgan (to Courtaulds Ltd). USP 2 870 595, Jan. 27, 1959. (1043)

In order to wind a transfer tail on a part of a ring spindle not normally traversed by the ring, cam mechanism is used to give the ring an additional displacement, with a latch (constituted by part of the cam profile) to maintain this displacement until, at a predetermined point in the traversing cycle, the latch is disengaged.

CREEL FOR TWISTING AND SPINNING MACHINES. W. W. Hewitt (to Parks-Cramer Co.). USP 2 869 903, Jan. 20, 1959. (1044)

Method of attaching the spindle supporting rails to the lateral arms of a creel without tapping holes in the latter.

TWISTING SPINDLE BALLOON CONTROL. A. W. Vibber. USP 2 870 596, Jan. 27, 1959. (1045)

Rotating balloon contacting device which detects changes in the size or shape of the balloon and controls the tension of the strand feeding device in response to such changes.

Yarns B5

TIRE CORD. S. P. Gundavda (to Research Assoc. of Brit. Rubber Mfrs.). BP 804 005, Nov. 5, 1958. Through BCIRA 39: 327 (1959). (1046)

To improve the adhesion of rubber to Terylene in tires, the yarn is run through 20-30% caustic soda at 75° C, washed and passed through a dispersion of rubber mixed with resorcinol/formaldehyde resin.

YARN PACKAGE. E. Marjoram (to J. Stell & Sons Ltd). BP 804 045, Nov. 5, 1958. Through BCIRA 39: 317 (1959). (1047)

Two or more packages of yarn are wound simultaneously on a long paper tube which is initially weakened at locations between the intended packages (by partly cutting it through with a straight or rotary knife), and the tube is then removed from the frame and broken.

REINFORCING MATERIAL FOR PNEUMATIC TIRES. H. W. Trevaskis (to Dunlop Rubber Co. Ltd). BP 804 464, Nov. 19, 1958. Through BCIRA 39: 304 (1959). (1048)

In twisting the reinforcing cables (e.g. of wire) for pneumatic tires, short fibers are dropped over the twisting zone so that they are incorporated in the cable and stick out about 1/16 to 3/32 of an inch. This improves the adhesion of rubber.

METHOD OF MAKING NOVELTY YARN. T. B. Moore, Jr. (to Deering Milliken Research Corp.). USP 2 864 230, Dec. 16, 1958. (1049)

A yarn with twisted loops or kinked tails projecting along its length at spaced intervals is produced by plying a highly twisted effect yarn around a carrier yarn.

CUTTING DEVICES FOR CUTTING CONTINUOUS LENGTHS OF YARN OR THREAD. W. Felton (England). USP 2 868 290, Jan. 13, 1959. (1050)

IMPREGNATED SYNTHETIC FIBER SEWING THREAD. H. D. Corkum (to Am. Thread Co.). USP 2 870 045, Jan. 20, 1959. (1051)

Fusion breakage is minimized by impregnating the thread with an emulsion consisting of petroleum jelly, other lubricants, and Teflon.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

AUTOMATIC WEFT PIRN WINDING MACHINE. Maschinenfabrik Schweiter AG. BP 803 646, Oct. 29, 1958. Through BCIRA 39: 316 (1959). (1052)

A catch hook is mounted along the axis of the driving spindle so that the hook can be moved in one direction to catch the yarn from a full pirn and transfer it to an empty pirn, and disengaged by moving it in the other direction.

BEAM WARPING MACHINE. W. Reiners (Germany). BP 803 707, Oct. 29, 1958. Through BCIRA 39: 324 (1959). (1053)

A warping beam is fitted with a compacting roller, the two being independently movable axially so as to provide two working conditions during warping, either the beam or the roller being movable while the other is fixed.

FLANGED WARP BEAM. L. Stanworth (to T. Ashworth & Co. Ltd). BP 803 831, Nov. 5, 1958. (Addition to BP 663 644). Through BCIRA 39: 323 (1959). (1054)

Resilient lever mechanism for clamping a flange to a beam barrel.

CONTAINER FOR WOUND BOBBINS. Maschinenfabrik Schweiter AG. BP 804 150, Nov. 12, 1958. (Addition to BP 751 995). Through BCIRA 39: 320 (1959). (1055)

Weft bobbin magazines are used as containers, so that separate loading of the magazines is avoided.

CREEL BOBBIN MOUNTING. Luwa AG. BP 804 337, Nov. 12, 1958. Summary in BCIRA 39: 322 (1959). (1056)

WARPING MACHINE. A. W. H. Porter (to F. N. F. Machy. Mfg. Co. Ltd). BP 805 178, Dec. 3, 1958. Through BCIRA 39: 325 (1959). (1057)

To reduce axial displacement of warp ends (due to trapping, especially with highly twisted or low-twist yarn) the warping machine is fitted with a roller on a movable axis and a reed close to the roller and movable with it. In threading up, the ends pass through the reed and around the roller on their way to the beam; they pass directly from the roller to the beam, the ends being sandwiched between them.

COP WINDING DEVICE FOR SPOOLING MACHINES, ESPECIALLY FOR SYNTHETIC THREADS. W. A. König (to Industrie-Werke Karlsruhe AG). USP 2 869 796, Jan. 20, 1959. (1058)

The bobbin holders are displaceable in a horizontal direction perpendicular to the axis of the driving roller and parallel to each other, so that a uniform pressure may be exerted simultaneously on all the bobbin holders.

APPARATUS FOR DETECTING CRITICAL VALUES OF YARN FEED RATE. Soc. d'Applications Gen. d'Elect. & de Mécanique. BP 805 306, Dec. 3, 1958. Summary in BCIRA 39: 318 (1959). (1059)

FILAMENT SPOOL SPINDLE JOURNAL MOUNTING. G. A. Spencer and H. R. Sell (to Firestone Tire & Rubber Co.). USP 2 849 196, Aug. 26, 1958. (1060)

Novel mounting means for the spool spindle, and novel traverse mechanism whereby entanglement of the filament is prevented and constant tension is maintained.

AUTOMATIC LOADING AND UNLOADING WINDING ARBOR. C. L. Wellington. USP 2 851 226, Sept. 9, 1958. (1061)

Will automatically load, wind, strip, and remove a wound package without the aid of an operator.

YARN CLAMP. W. C. Trost (to Barber-Colman Co.). USP 2 867 028, Jan. 6, 1959. (1062)

In a yarn clamp for holding the threads of a warp sheet, the jaws are formed from elongated strips of a resilient material, e.g. rubber, so that the strips, when moved toward each other, are compressed against the insertion bar and grip the threads firmly.

YARN TRANSFER MECHANISM FOR AUTOMATIC WEFT PIRN WINDING MACHINES. K. Marx and M. Stäubli (to Maschinenfabrik Schweiter AG). USP 2 867 388, Jan. 6, 1959. (1063)

The thread end is eliminated by gripping the yarn, while it is still engaged by the yarn guide and still connected to the full pirn, with a catch hook to form a loop; the loop is wound onto an empty pirn, which is rotated more rapidly than the full pirn, so that the yarn is ripped close to the full pirn. The yarn end and the loop are completely wound into the yarn package.

TENSION-SETTING MECHANISM FOR MULTIPLE WINDING MACHINE. S. L. Abbott (to Abbott Mach. Co.). USP 2 869 798, Jan. 20, 1959. (1064)

THREADING-IN MECHANISM FOR WINDING MACHINES. J. V. Keith (to Universal Winding Co.). USP 2 870 971, Jan. 27, 1959. (1065)

Mechanism for attaching a continuously advancing yarn to the spindle, severing the waste end of the yarn, and winding a transfer tail prior to winding.

Weaving C2

PILE WIRE FOR PRODUCING EMBOSSED EFFECTS. W. Y. Robb (to Crompton & Knowles Loom Works). USP 2 868 231, Jan. 13, 1959. (1066)

REED FRAME. C. E. Schmidt (to Schmidt Mfg. Co.). USP 2 869 587, Jan. 20, 1959. (1067)

The dent wires are anchored in the reed frame by an elastic matrix without the use of the spirally wound spring members usually employed.

HARNESS FOR JACQUARD LOOM. R. W. Shackleton (to S. Dracup & Sons Ltd). BP 804 698, Nov. 19, 1958. Through BCIRA 39: 328 (1959). (1068)

A substantially rigid connection between a mail and its lingoe is provided by a loop on the mail that engages a rivet on a flattened end portion of the lingoe.

JACQUARD MECHANISM. H. V. Foster and D. Johnston (to Crompton & Knowles Corp.). USP 2 868 232, Jan. 13, 1959. (1069)

Means for preventing vibration of an upright away from the vertically reciprocating lifter knife at the time the latter, in its upward motion, has reached a point where it should engage the upright.

WEFT FEEDERS FOR LOOMS WITH CONTINUOUS FEED. R. Dewas (France). USP 2 868 233, Jan. 13, 1959. (1070)

The releasing blade of a pulling needle is of sufficient length so that it will remain engaged in the clamp even when the needle is at its farthest position outside the shed.

PICKING MECHANISM. P. A. Nims (to Crompton & Knowles Corp.). USP 2 868 234, Jan. 13, 1959. (1071)

Means for holding a picking cam in adjusted position on the picking shaft by means of wedges.

THREAD CUTTING TEMPLE FOR WEFT REPLENISHING LOOMS. A. Cederlund and W. E. Kimmel (to Crompton & Knowles Corp.). USP 2 868 235, Jan. 13, 1959. (1072)

Temple with movable blade and thread control means to prevent or permit cutting of thread, depending on whether the thread is that of a stored shuttle or one involved in weft replenishment.

CIRCULAR LOOM. M. M. P. Jasienski (to Compagnie Francaise Othermo). USP 2 869 586, Jan. 20, 1959. (1073)

A considerably increased weaving speed is achieved by a novel shuttle propulsion, an improved guiding of the shuttles, a reduction in the number and weight of members undergoing alternating movements, so that inertia is reduced.

OFFSET CUTTING BLADE FOR CARPET PILE WIRE. C. C. Berry (to James Lees & Sons Co.). USP 2 870 795, Jan. 27, 1959. (1074)

The blade is used for obtaining cut pile tufts of unequal lengths.

LOOM REED. V. C. Laughlin. USP 2 870 796, Jan. 27, 1959. (1075)

Loom reed of improved rigidity due to improved end bars and split retainer caps.

Knitting C3

PATTERN CONTROL FOR CIRCULAR JACQUARD HOSIERY MACHINE. L. Ferraguti (Italy). USP 2 868 002, Jan. 13, 1959. (1076)

Single control for lifting the levers, stopping the patterning drum, and returning the drum to its initial position.

SPLICING THREAD CUTTING MECHANISM FOR CIRCULAR KNITTING MACHINE. R. N. Toone (to B. Toone (Nottingham) Ltd). USP 2 869 343, Jan. 20, 1959. (1077)

APPARATUS FOR INSPECTING AND TRIMMING HOSIERY. J. T. Laxson (to Marvel Specialty Co.). USP 2 869 765, Jan. 20, 1959. (1078)

Hollow inspection form through which air may be forced in either direction to facilitate the inspection and trimming of hosiery from either the right or wrong side.

SPRING DRIVEN TAKEUP MECHANISM FOR CIRCULAR KNITTING MACHINES. R. E. Zeruneith. USP 2 870 618, Jan. 27, 1959. (1079)

TUBULAR KNIT FABRIC FOR REINFORCING FLEXIBLE HOSE. J. Greczin (to Fidelity Mach. Co.). USP 2 870 619, Jan. 27, 1959. (1080)

The fabric is made up of knitted webs superimposed on each other so that the wales of one lie in parallel alignment with and within the spaces between the wales of the other web. The yarns connecting the webs intersect each other on lines diagonal to the coursewise direction of the wales.

Fabrics C4

SEALING CUT EDGES OF WOVEN FABRIC. W. Tong (to Kirklees Ltd). BP 803 872, Nov. 5, 1958. Through BCIRA 39: 335 (1959). (1081)

The edges of a pile of cut pieces are gassed, sprayed with a solution of a thermoplastic agent, and dried. Single pieces are then removed from the pile and hot calendered to cure the resin.

NONWOVEN FABRIC. E. Elöd (Germany). BP 804 135, Nov. 5, 1958. Through BCIRA 39: 330 (1959). (1082)

The bonding agent is an aqueous dispersion or foam containing a pre- or intermediate condensate of a diisocyanate partially polymerized with a polyester having terminal OH groups. The impregnated web of fiber is heated to convert the agent into a resilient nonthermoplastic and nonadhesive resin.

RELIEF EFFECT FABRICS. Soc. Rhodiaceta. BP 804 151, Nov. 12, 1958. Through BCIRA 39: 334 (1959). (1083)

In a fabric produced from separate shrunk nylon yarns and Terylene yarns of greater shrinkage capacity, relief or blister effects are obtained by heating the fabric to about 220° C.

COLORED LAMINATED FABRICS. W. Henstead and C. P. Tattersfield (to Courtaulds Ltd). BP 804 264, Nov. 12, 1958. Through BCIRA 39: 333 (1959). (1084)

Colored fabrics are bonded together by means of a polythene interlining fabric made from spun-dyed polythene threads of a matching shade.

SURGICAL DRESSINGS. W. H. Powell (to Vernon & Co. Ltd). BP 805 082, Nov. 26, 1958. Through BCIRA 39: 331 (1959). (1085)

A surgical dressing has incorporated in it a yarn around which is wrapped a thin wire or ribbon of gold or silver alloy to render it detectable in the body by x-rays.

ACID AND ALKALI RESISTANT LAMINATED FABRIC. J. Boyd, E. W. Richardson, and H. A. Thomas (to Courtaulds Ltd). BP 805 309, Dec. 3, 1958. Through BCIRA 39: 332 (1959). (1086)

Fabric for making protective garments comprises upper and lower fabrics woven or knitted from polyacrylonitrile or polythene yarns enclosing an interlayer web of staple fibers of either polymer. The assembly is held together by cross-stitching or thermal bonding at points at least half an inch apart.

SOFT STRONG NONWOVEN WEB SUITABLE FOR SURGICAL USES. C. L. Henderson and H. G. Fitzgerald (to Kimberly-Clark Corp.). USP 2 865 783, Dec. 23, 1958. (1087)

A thin tenuous fiber web is sized with a water-soluble size, printed with an adhesive, treated with hot water to remove the size, dried, slit, and wound into rolls.

CONTROL OF PILE HEIGHT IN NEEDLING. C. H. Masland, II (to C. H. Masland & Sons). USP 2 866 424, Dec. 30, 1958. (1088)

The height of individual pile yarn ends is controlled by applying streams of gas to selected yarn ends in the direction of the feed.

CARPET TEXTURING DUE TO PILE OVERLAPS. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 867 244, Jan. 6, 1959. (1089)

Textured effects on the surface of the pile are obtained by special thread-ins using two or more pile warps.

PILE CARPET WITH IMPROVED COVERAGE. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 867 245, Jan. 6, 1959. (1090)

MOLDED FABRIC FOR BRASSIERE CUPS. W. L. Thompson, Jr. USP 2 867 889, Jan. 13, 1959. (1091)

The molded portion of the cup is made up of rows of nylon yarns drawn to different degrees, with the yarns traversing the center being the least drawn.

MANUFACTURE OF RESIN COATED WOVEN GLASS FABRIC INSECT SCREENING. R. C. Horton, W. H. Miller, and W. K. Lydic (to Owens-Corning Fiberglas Corp.). USP 2 867 891, Jan. 13, 1959. (1092)

AIR PERMEABLE WOVEN FABRIC. H. W. Schwab (to H. W. Schwab Textile Corp.). USP 2 869 588, Jan. 20, 1959. (1093)

Grid-like pattern of enlarged air spaces is produced by the use of regularly recurring tightly woven groups of four warp threads and four weft threads, the groups being separated from each other to a greater extent than the individual threads within the groups.

BAGS. R. P. Perry (to Bemis Bros. Bag Co.). USP 2 869 589, Jan. 20, 1959. (1094)

Open-mesh fabric for making draw closure bags is woven with a draw closure which takes the place of the usual selvage-forming warps.

FINISHING AND CHEMICAL PROCESSING D

REMOTE CONTROL EDGE ALIGNMENT DEVICE. P. W. Jacobsen (to H. G. Weber & Co.). USP 2 860 841, Nov. 18, 1958. (1095)

Electric control circuit for shifting an unwinding fabric roll to control the edge alignment of the fabric at some remote processing point.

WEB-GUIDING APPARATUS. B. Backlert, B. Lanne, and S. Wallin (to Svenska Flaktfabriken AB). USP 2 864 176, Dec. 16, 1958. (1096)

Turning rolls between runs are formed as hollow perforated cylindrical shells and are connected at at least one of their ends to a suction and/or a pressure chamber. Each turning roll is provided with a number of radial partitions dividing the roll into a number of equal, lengthwise separate channels with their ends open towards the suction and pressure openings.

CONTROL OF GASEOUS MEDIA IN TEXTILE FINISHING PROCESSES. W. K. Donaldson and D. Ainscough (to Tootal Broadhurst Lee Co. Ltd). USP 2 870 628, Jan. 27, 1959. (1097)

The apparatus described, which is used for measuring the proportions of the constituents of a gaseous mixture, is applicable to steam printing, wool shrinkproofing with mixtures of chlorine and air, or crease resisting processes in which superheated steam is used.

Chemical processes D1

CONTINUOUS HYPOCHLORITE BLEACHING OF FABRICS MADE FROM VEGETABLE FIBERS. W. A. S. White and N. F. Crowder (to Imp. Chem. Inds. Ltd). BP 803 796, Nov. 5, 1958. Summary in BCIRA 39: 395 (1959). (1098)

SQUEEZE ROLL APPARATUS. K. Quoos and P. Urban (Germany). USP 2 851 869, Sept. 16, 1958. (1099)

Improved means for applying pressure over the entire length of a small squeeze roll while permitting local movement or deflection of the squeeze roll when a fold or seam passes between the squeeze rolls.

ACID RESISTANT CELLULOSE DECATING BLANKETS. L. A. Fluck, T. F. Cooke, and P. B. Roth (to Am. Cyanamid Co.). USP 2 864 723, Dec. 16, 1958. (1100)

Cellulose fabrics for use as decating blankets are made acid resistant by treatment with an aminoplast resin and an alkaline earth salt.

SCOURING RAW WOOL BY ANAEROBIC FERMENTATION. A. M. Buswell. USP 2 864 746, Dec. 16, 1958. (1101)

PRODUCING IRIDESCENT COLOR EFFECTS. K. Risch (to Heberlein Patent Corp.). USP 2 865 787, Dec. 23, 1958. (1102)

The iridescent effects are produced by depositing first a metal coating and then a metal oxide coating, from the vapor state, on a resin coated fabric.

Dyeing and printing D2

DYEING MELANGE EFFECTS ON WOOL. A. J. I. Harding (to Maifoss Ltd). BP 793 515 and 793 516, Apr. 16, 1958. (Addition to BP 680 862). Summary in Chem. Abstr. 53: 725 (1959). (1103)

PROCESS FOR PRODUCING OR STRIPPING DYEINGS. Ciba Ltd. BP 800 401, Aug. 27, 1958. Through BCIRA 38: 646 (1958). (1104)

Polyvinylpyrrolidone is claimed as a leveling or stripping agent for the chromium or cobalt complexes of azo dyes (free from sulfonic acid groups) on wool and other nitrogenous fibers.

DIFFERENTIAL DYEING EFFECTS. C. Fearnley and G. W. Madaras (to Bradford Dyers' Assoc. Ltd). BP 802 574, Oct. 8, 1958. Through BCIRA 38: 735 (1958). (1105)

Differential dyeing effects, particularly on nylon, Orlon, and Dynel fabrics, are produced by the use of known resist agents in combination with swelling agents, locally applied in pastes, that modify the resist effect.

METHOD OF WET TREATING TEXTILE MATERIAL. F. Booth (to Southalls (Birmingham) Ltd and Jackson & Brother Ltd). BP 802 685, Oct. 8, 1958. Through BCIRA 38: 734 (1958). (1106)

A continuous length of the material is fed around a hollow rotating drum immersed in a treating liquid (scouring or dye liquor), and the drum is heated internally to cause boiling.

DYEING OF THREADS, FILAMENTS, FIBERS AND THE LIKE. R. A. Poole and L. A. Bashford (to Courtaulds Ltd). BP 803 293, Oct. 22, 1958. Through BCIRA 38: 5242 (1958). (1107)

Materials composed of cellulose triacetate, acrylonitrile polymers and copolymers, or Terylene are dyed with dispersed cellulose acetate dyes in the presence of a cyclohexylphenol, e.g. dimethylcyclohexyl-, p-menthyl- or p-bornyl-phenol.

SCREEN PRINTING MACHINES. J. T. Blair (to Whitebirk Weaving Co. Ltd). BP 802 728, Oct. 8, 1958. Through BCIRA 38: 735 (1958). (1108)

The mechanism for driving the squeegee mounting is such that two squeegees may be employed and the appropriate one brought into register with the screen at the beginning of each stroke.

TREATMENT OF POLYETHYLENE TEREPHTHALATE SURFACES. W. E. F. Gates (to Imp. Chem. Inds. Ltd). BP 802 974, Oct. 15, 1958. Through BCIRA 38: 735 (1958). (1109)

The bonding properties of polyethylene terephthalate (e.g. for printers' ink) are improved by exposing the surface at 150-220° C to ozonized air.

PROCESS OF DYEING ACRYLONITRILE POLYMER AND COPOLYMER TEXTILE ARTICLES. Etablissements Schaeffer & Cie. BP 803 095, Oct. 15, 1958. Through BCIRA 38: 735 (1958). (1110)

The dye bath is made up with cupric sulfate and an electric current is passed through it between nonoxidizable steel wire electrodes, the cathode just below the surface and the anode at the bottom of the vessel. Cuprous ions, necessary for the attachment of the dye to the acrylonitrile polymer, are produced by reduction at the cathode, but, under the specified conditions, no deposition of copper occurs.

FAST DYEINGS ON ANIMAL OR SYNTHETIC FIBERS OR MIXTURES THEREOF. Farbwerke Hoechst AG. BP 803 287, Oct. 22, 1958. Through BCIRA 38: 5243 (1958). (1111)

A highly dispersed aqueous suspension of an azo dye that contains a metalizable grouping in o:o'-position to the azo group is applied to the fiber (wool, nylon, or mixtures) from a neutral or acid bath and the metalizing agent (e.g. a chromium compound) is added to the dyebath or applied in a subsequent step.

LIQUID TREATMENT OF TEXTILE MATERIALS. M. J. Topham (to Calico Printers' Assoc. Ltd). BP 803 453, Oct. 22, 1958. Through BCIRA 38: 5244 (1958). (1112)

The material is passed between an engraved roller to which liquid is applied and a roller covered with resilient material. A third roller, covered with resilient material, is pressed against the engraved roller, between the point where it receives the liquid and the point where the material touches it, to regulate the film of liquid. Thus, the engraved roller may dip into a trough of liquid and the second roller may come above it with the third roller at the side. The arrangement is particularly useful in flash aging where a small, fixed proportion of hydrosulfite solution is applied to a printed fabric to prevent bleeding and marking-off during steaming.

PIGMENT PRINTING BINDING AGENTS OF HARDENABLE POLYEPOXIDES. Ciba Ltd. BP 803 647, Oct. 29, 1958. Through BCIRA 39: 399 (1959). (1113)

PYRROCOLINE DYES FOR POLYESTER FIBERS. R. S. Long and R. J. Boyle (to Am. Cyanamid Co.). USP 2 863 714, Dec. 9, 1958. (1114)

VAT DYEING WITH DYESTUFF EMULSIONS. Badische Anilin und Soda Fabrik AG. BP 804 032, Nov. 5, 1958. Through BCIRA 39: 397 (1959). (1115)

Vat dyeings are produced with the aid of water-in-oil emulsions of vat dyes containing up to 25% of an organic liquid of bp range 60-220° C and up to 30% of an emulsifier that is more soluble in the oil phase than in the aqueous phase. The fabric is slop-padded with the emulsion, the vat dye is reduced by the pad-steam process, and reoxidation is effected in the washing tanks.

DISCHARGE PRINTED VISCOSE FABRICS. J. P. Bemberg AG. BP 804 056, Nov. 5, 1958. Through BCIRA 39: 402 (1959). (1116)

Fabrics are woven or knitted from spun-dyed viscose yarn containing dispersed pigments that can be removed by means of strong reducing agents. Discharge prints are obtained by applying the reducing agent according to pattern.

PRINTING PROCESS. S. N. Bradshaw and H. B. Mann (to Courtaulds Ltd). BP 804 120, Nov. 5, 1958. (Addition to BP 747 622). Through BCIRA 39: 401 (1959). (1117)

The medium in which the dye is transferred to the fabric is virtually molten urea, whose mp is depressed by the addition of suitable substances that dissolve in molten urea.

PROCESS FOR THE BASIC DYEING OF VINYLIDENE CYANIDE INTERPOLYMERS. H. Heller (to B. F. Goodrich Co.). USP 2 848 296, Aug. 19, 1958. (1118)

Process for dyeing vinylidene cyanide interpolymer fibers involving the use of certain specific aromatic acids in basic dye baths as promoters to improve the pickup of the basic dyes by the fibers.

MEANS FOR DYEING FABRICS USING VIBRATIONAL ENERGY. E. W. Smith (to L. S. Adams Eng. Co.). USP 2 858 689, Nov. 4, 1958. (1119)

Apparatus for dyeing open width fabric by squeezing dye in and out of the fabric with a high frequency oscillating, vibrating, rotating roll.

DYEING COPOLYMER FIBERS. T. A. Feild, Jr., A. G. Schoonover, and J. H. Purse (to Union Carbide Corp.). USP 2 859 086, Nov. 4, 1958. (1120)

Copolymer fibers of acrylonitrile and vinyl compounds can be dyed to give high color values with both water-soluble and water dispersible dyes by adding a phosphorinanyl derivative to the dyebath.

MACHINE FOR STEPWISE SCREEN PRINTING. R. R. Laupman (to Gebr. Stork & Co. Apparatenfabriek NV). USP 2 866 404, Dec. 30, 1958. (1121)

Drive mechanism which alternates an even number of short inoperative squeegee strokes with a smaller number of longer operative squeegee strokes. This arrangement makes it possible to so choose the length of the inoperative strokes that they do not take place above the printing pattern and printing paste does not drip onto the stencilled portion of the lifted screen.

DRIVE FOR PRINTING ROLLERS OF PRINTING MACHINES. H. P. Böhme (to Joh. Kleinewefers Sohne). USP 2 869 459, Jan. 20, 1959. (1122)

Drive designed to compensate for the running ahead of one or more printing rollers in a machine equipped with a rapport mechanism for maintaining a desired operative relationship between the rollers.

Mechanical processes D3

ADJUSTING AND PERMANENTLY INDICATING THE WORKING CONDITIONS OF WORKER ROLLER NAP-RAISING MACHINES. A. C. Scholaert (France). USP 2 857 649, Oct. 28, 1958. (1123)

Automatic device for instantaneously indicating and adjusting the intensity of scratching regardless of the traveling speed of the fabric.

APPARATUS FOR REDUCING SHRINKAGE AND CREEP OF THERMOPLASTIC YARNS. R. C. Winckhofer (to Allied Chem. Corp.). USP 2 859 472, Nov. 11, 1958. (1124)

Apparatus for stabilizing molecularly oriented thermoplastic filament by heating under tension and contacting the hot filament with a cool, solid surface moving at the same linear speed as the filament.

CONSTANT TENSION WEB UNWINDING MECHANISM. R. L. Bowen, Jr. USP 2 859 921 and 2 859 923, Nov. 11, 1958. (1125)

Mechanism for maintaining a constant speed on the web tensioning mechanism through a variable speed transmission responsive to the change in roll diameter which reacts to control the speed of the braking mechanism.

CONSTANT TENSION UNWINDING MECHANISM. R. L. Bowen, Jr. USP 2 859 922, Nov. 11, 1958. (1126)

Mechanism for maintaining a constant speed on the fabric tensioning mechanism through a variable speed transmission responsive to the change in brake speed. A gear pump is used as a brake.

REMOTE CONTROL EDGE ALIGNMENT DEVICE. P. W. Jacobsen and H. H. Weber (to H. G. Weber & Company). USP 2 860 840, Nov. 18, 1958. (1127)

Device for automatically aligning the edge of web material at a point remote from the roll from which the material is unwound. An air pressure detector (or a pair of light beams and photoelectric cells) is used to detect misalignment. The position of the role is adjusted in response to correction signals from the detector.

CELLULOSE TRIACETATE FABRICS OF IMPROVED SAFE IRONING TEMPERATURE. D. Finlayson and B. Krzesinski (to Brit. Celanese Ltd). USP 2 862 785, Dec. 2, 1958. (1128)

Cellulose triacetate which may be ironed at 220° to 240° C is obtained by heating the fabric under tension at 120° to 285° C to convert the triacetate to the crystalline state in which the fibers have a sticking temperature of 220° to 240° C.

Drying, setting, conditioning D4

DRYING OF FABRICS, PAPERS, CARDBOARDS, AND OTHER STRIP MATERIAL. J. Dungler (France). BP 802 296, Oct. 1, 1958. (Addition to BP 773 606). Through BCIRA 38: 706 (1958). (1129)

The blowing nozzles are surrounded by electrically-heated radiant elements that project heat radiations on to the running strip (e.g. fabric) in the drying chamber and also heat the drying medium issuing from the blowers.

CURLED YARNS. W. R. Keen (to Collins & Aikman Corp.). USP 2 857 651, Oct. 28, 1958. (1130)

Curled or crimped yarns are produced by needle tufting yarns into a woven backing material, heat setting to set the loops, and pulling out the tufted yarns as permanently crimped individual yarns.

DRYER SCREEN. F. B. Morrill (to James Hunter Mach. Co.). USP 2 862 306, Dec. 2, 1958. (1131)

Screen for removing lint from dryers using hot air or superheated steam.

DIELECTRIC HEATING APPARATUS FOR DRYING RAYON YARN CAKES. W. C. Rudd (to Magnetic Heating Corp.). USP 2 866 063, Dec. 23, 1958. (1132)

With dielectric heating, the inner portions of the cake are dried first or at least not later than the outer portions, allowing uniformity of shrinkage and greater uniformity of drying than is possible with oven drying.

TESTING AND MEASUREMENT E

Yarns E2

APPARATUS FOR MEASURING THICKNESS OF PICKER LAP DURING PROCESSING. P. G. Schuenemann, Jr. (to Clevite Corp.). USP 2 858 614, Nov. 4, 1958. (1133)

Fabrics E3

TELEVISING APPARATUS FOR OBSERVING MOVING FABRICS. Lindauer Dornier GmbH. BP 803 843 and 804 099, Nov. 5, 1958. Summary in BCIRA 39: 444 (1959). (1134)

CANTILEVER FABRIC STIFFNESS AND CURL TESTER. J. J. Press. USP 2 860 510, Nov. 18, 1958. (1135)

APPARATUS FOR TESTING FABRICS FOR WEAR. H. W. Stiegler (to AATCC). USP 2 862 383, Dec. 2, 1958. (1136)

Results with the apparatus described bear a high correlation to the effects of actual wear and laundering as to wear resistance, colorfastness, strength, weight loss, shrinkage, porosity, etc.